This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

LANE MEDICAL LIBRARY STANFORD
N541 .C61 1860 STOR
Chapters on diseases of the ovaries / tr

LANE

MEDICAL LIBRARY

LEVI COOPER LANE FUND

Chapters

ON

DISEASES OF THE OVARIES,

Translated, by permission,

FROM

KIWISCH'S CLINICAL LECTURES

ON THE SPECIAL PATHOLOGY AND TREATMENT OF THE DISEASES OF WOMEN;

WITH NOTES AND AN APPENDIX ON THE OPERATION OF OVARIOTOMY.

BY JOHN CLAY,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND;
LICENTIATE OF THE SOCIETY OF APOTHECARIES, LONDON;
LICENTIATE OF MIDWIFERY, ROYAL COLLEGE OF SURGEONS, ENGLAND;
CORRESPONDING MEMBER OF THE IMPERIAL AND ROYAL MEDICAL SOCIETY OF VIENNA;
FELLOW OF THE OBSTETRICAL SOCIETY, LONDON;
ETC., ETC.

LANE MEDICAL LIBRARY
14182
SAN FRANCISCO

LONDON:
JOHN CHURCHILL, NEW BURLINGTON STREET.
MDCCCLX.

LANE LIBRARY

BIRMINGHAM:
PRINTED BY JOSIAH ALLEN, JUN.,
10, LIVERY STREET.

C 61
1860
Copy 2

TO

THOMAS SPENCER WELLS, ESQUIRE, F.R.C.S.L.,

LECTURER ON SURGERY AT THE GROSVENOR PLACE SCHOOL OF MEDICINE
SURGEON TO THE SAMARITAN HOSPITAL, &c., &c.;

WHOSE GREAT ATTAINMENTS AND PRACTICAL SKILL AS A SURGEON
HAVE BEEN ASSIDUOUSLY DEVOTED TO THE IMPROVEMENT
AND PERFECTION OF THE OPERATION OF OVARIOTOMY;

This Work is Dedicated,

WITH SENTIMENTS OF THE HIGHEST ESTEEM,

BY HIS OBLIGED AND OBEDIENT SERVANT,

JOHN CLAY.

PREFACE.

THE following translation from SCANZONI'S edition of the late Professor KIWISCH'S admirable work on the *Pathology and Treatment of the Diseases of Women*, of the chapters relating to diseases of the ovaries, is submitted to the profession with some degree of diffidence, but not without a hope that it may prove acceptable to those interested in that class of diseases, especially as no recent monograph on the subject exists in the English language, and the treatment, more particularly with reference to the operation of ovariotomy, is still a question of much discussion.

I originally intended to have appended to KIWISCH'S Tables all the operations that were not included therein down to the present time; but on comparing his collection with the cases as originally reported it became obvious that the details as given by him were very scanty, and in many instances very inaccurate, and not available for practical purposes. His tables, moreover, are incomplete, as several operations had been performed prior to their publication which were not included in them. Whilst deliberating under these circumstances upon the course I should pursue,

I was fortunately in communication with Mr. CÆSAR HAWKINS, of London, to whom my project was incidentally mentioned, and who, knowing by experience the difficulties attending the collection of accurate statistics, counselled me in the kindest manner to commence *de novo* by having recourse to the cases of ovariotomy as originally published, instead of trusting to the accuracy of compilers. This plan I at once proceeded to carry out as far as was practicable; but as many American and some German cases were widely distributed over the periodical literature of each country, it was found impossible to procure them, and finding by comparison that the tables of Drs. HAMILTON and LYMAN, of America, and Dr. SIMON, of Germany, were exceedingly accurate, such cases as I had not in my collection I have transcribed from these sources with adequate acknowledgment. Several cases in these reports were communicated to the respective reporters by the operators, and could not have been obtained from any other source. To ensure accuracy the tabulated details of each case operated upon in Great Britain were forwarded to the respective operators for revision; reports of fresh cases were also solicited, and in many instances proofs were forwarded for correction. The cases I had tabulated were then collated with the published tables, referred to in the Appendix. Every precaution therefore has been taken by me to ensure accuracy. It is to be regretted that the details of many of the unsuccessful cases are not more ample. This has not arisen so much from an

indisposition on the part of the operators to furnish the particulars, as from a want of care in preserving the clinical records of the cases.

In Table IV of the Appendix, Division B, several cases are recorded as attempted ovariotomy in which the operation was limited to an exploratory incision, but as the operation would have been completed but for the presence of adhesions, they have been placed in this class for convenience of arrangement.

I shall always recur with feelings of pride and gratification to the pleasing reminiscence of having had the honour of corresponding with so many talented members of the profession of which I am a member; and that in nearly every instance my communications have been responded to with the greatest courtesy. From some I received valuable suggestions, from others valuable reports, which have enabled me to render the tables more complete than they would otherwise have been, and also to record many unpublished cases. To particularize would be an invidious distinction, and it is but a poor duty I can perform to all such to tender them my warmest and best thanks.

I have a less pleasing duty to perform, in justice to those who have so kindly aided me in my endeavours, in mentioning those who were not courteous enough to reply to my communications for particulars: these were Dr. Bird, London; Dr. Simpson, Edinburgh; and Mr. Terry, of Bradford. It is a duty incumbent on all who

have performed this operation to place the results of their experience before the profession, as by their undertaking it they have given some encouragement to others to follow their example. With reference to Dr. BIRD these remarks are particularly applicable, as he has placed some of his perhaps more favourable experience before the profession, and, by the omission of full particulars of his more unsuccessful practice, has left his report in an exceedingly unsatisfactory state. It was on this account that I was particularly anxious to have correct details of his cases, and repeatedly forwarded papers to him, but I have not received even an acknowledgement from him. It is not for me to speculate on the causes which induce him to withhold the information, which has, as I have been informed, been often sought in vain by others as well as by myself.

The whole of SCANZONI'S notes have been translated, and are indicated by the letter "S"; those added by myself bear my own initials; and those without any distinctive mark are by the author.

64, Moseley Street,
Birmingham.

CONTENTS.

	PAGE
I. Introduction.	
Anatomy and physiology of the ovaries	1
II. Pathology and diagnosis of ovarian diseases in general .	16
Exploration of diseased ovaria	30
Etiology of ovarian diseases	38
III. Special pathology and treatment of ovarian diseases.	
Classification	43
I. Absence and imperfect development of the ovaries	44
II. Dislocations of the ovaries. Herniæ . . .	50
Symptoms and diagnosis of herniæ	54
Therapeutics	55
III. Inflammations of the ovaries	60
a. Inflammation of the ovaries apart from the puerperal condition.	
Pathological anatomy	61
Symptoms and course	66
Diagnosis	70
Prognosis	72
Treatment	74
b. Inflammations of the ovaries in the puerperal condition	75
Pathological anatomy	76
Etiology	80
Symptoms and course	82
Treatment	87
IV. Abscesses of the Ovaries	89
Pathological anatomy	89
Symptoms and course	93
Treatment	95

V. Simple follicular degeneration (formation of cysts) of the ovaries (hydrops ovarii simplex). PAGE

Pathological anatomy 100
Etiology 109
Symptoms 111
Termination and healing process of ovarian cysts . 118
Diagnosis 127
Prognosis 130
Therapeutics 132
Medical treatment 132
Surgical treatment 138
By tapping per vaginam 138
Tapping through the abdominal parietes . . 147
Keeping the cyst open with tubes . . . 164
Irritant injections 165
Incision of the cyst 167
Tapping and therapeutics 171
Partial excision of the cyst 173
Summary of surgical treatment 175
Method of tapping, &c. 177

VI. Compound ovarian cysts.

a. Cystoid ; b. alveolar degeneration ; c. cysto-sarcoma and cystoid cancer 181
Pathological anatomy 182
b. Alveolar degeneration of the ovary. . . . 189
c. Cysto-sarcoma and cystoid cancer 192
Symptoms 194
Diagnosis 200
Therapeutics 203
Extirpation 206
Conditions under which admissible . . . 211
Mode of performance 214
Subsequent management 219

VII. Solid tumours of the ovaries.

a. Hypertrophy ; b. adipose cysts ; c. apoplexy ; d. fibroids ; e. enchondroma and formation of bone ; f. cancer 222
Pathological anatomy 223
a. Hypertrophy 224
b. Adipose cysts 225

Pathological anatomy—continued: PAGE
c. Apoplexies of the ovary 231
d. Fibrous tumours of the ovary 232
e. Enchondroma 234
f. Cancer of the ovaries 235
Etiology 242
Symptoms and diagnosis 245
Prognosis 249
Therapeutics 251
Concluding observations 254

APPENDIX.

Introduction i
Table of rejected cases v
Details of successful cases of ovariotomy vi
Details of unsuccessful cases of ovariotomy lxxvi
Analysis cxxvi
Details of cases of partial excision of diseased ovaria . . cxxxiv
Details of cases of attempted ovariotomy:
a. Extra-ovarian tumours only removed cxlii
b. Abandoned in consequence of adhesions . . . clxviii
c. Abandoned in consequence of the disease being extra-ovarian clxiv
Table of number of cases operated upon, &c. . . . clxxiii
Concluding remarks clxxv

DISEASES OF THE OVARIES.

I. INTRODUCTION.

§ I.

ANATOMY AND PHYSIOLOGY OF THE OVARIES.

THE ovaries, it is well known, are placed on either side of the uterus, in the posterior and superior part of the small pelvis, immediately behind the broad ligaments upon that portion of the peritoneal layer which is extended laterally from the uterus to the linea innominata. The left ovary is generally found in close proximity to the rectum, while the right is necessarily at a greater distance from it. Both ovaries are attached to the lateral serous investment of the pelvis in such a manner that their internal extremity lies deeper than their external, the latter being situated from one to two inches beneath the innominate line.

The ovaries are two flattened oval bodies of the size of a small date; they are embedded in a fold of the perito-

neum, and are connected by it to the adjacent structures, which comprise the uterus, the broad ligaments, and the Fallopian tubes. They are attached to the uterus not only by a fold of the abdominal lining membrane, but also by a thin fibro-cellular tendon, into which some smooth muscular fibres are interwoven. This tendon arises from the fundus of the uterus, behind and a little beneath the Fallopian tube, and is enclosed between the peritoneal layers which extend to the ovary. In consequence of this arrangement, the ovaries, on the one side, are obliged to follow any considerable change in the position of the uterine fundus, and, on the other, the uterus is dragged from its place by great ovarian displacements. The first condition is most commonly observed, and is most marked, in pregnancy, when the lateral peritoneal folds with those connected to the ovaries are taken up to form the uterine covering, and are consequently shortened; at the completion of pregnancy the ligaments have become so short that the ovaries are found depending immediately from the lateral parts of the uterus with which they have ascended out of the pelvic cavity. A similar condition is necessarily produced in pathological enlargements of the uterus.

The ovary is in intimate connection with the broad ligaments, the posterior layer of which forms a kind of diverticulum designed for the reception and investment of that organ. The ovaries, as we have already stated, being situated posterior to the broad ligaments, it necessarily happens that ovarian enlargements, as a rule, push

the uterus and its appendages forward, while small, free ovarian tumours are pressed backwards upon the sacrum by the same structures. The Fallopian tubes being enclosed in the superior part of the broad ligaments are thus connected to the ovaries; but their fimbriated extremities are brought into a peculiar relation with these organs by a tail-shaped peritoneal process, the terminal limit of the diverticulum, formed by the posterior layer of the broad ligaments for the reception of the ovaries, which is known by the name of *ala vespertilionis*, or bat's-wing. The abdominal extremity of the tubes is always retained in proximity to the ovaries by these folds, which are about an inch long when on the stretch, and in pathological enlargements they are drawn still closer, until at length they are placed immediately upon them.

When we take into consideration the anatomical relation of the ovaries to the other adjacent structures, it is evident that the small intestine lies directly upon them. The movability enjoyed by this portion of the bowel may readily cause displacement of the ovaries, while, on the other hand, the small intestine may be pushed upwards by ovarian enlargements; but, as the size of the tumour increases, it will be pressed backwards in consequence of being tied down by the mesentery: under such circumstances large ovarian tumours always come into direct contact with the anterior abdominal wall, and give rise to the percussion sounds which will be afterwards described. We have also to observe, that in consequence of the

peristaltic contractions of the bowel, pathological adhesions of the ovaries to it are not easily produced, and are very rare compared with the frequent adhesions of the ovarian organs to the other adjacent structures.

We must not overlook the fact that the small intestine never lies below an ovarian tumour, so that the ovary always occupies the lowermost place in the pelvis—a circumstance not without importance in operations from the floor of the vagina. The rectum, which even in the normal position is situated very near to the ovaries, especially on the *left* side, comes in all cases of considerable ovarian enlargement into still closer contact with them, and the freer the tumour is, the more posteriorly it is situated—as we have already remarked. It frequently happens, in such cases, that diseased ovaria are found in the space of *Douglas* between the rectum and uterus, and are placed almost exactly in the median line of the pelvis. Some important pathological phænomena are produced by this position of the ovaries, which will be afterwards amply treated of. The relation of diseased ovaria to the bladder, the vessels, and the nervous trunks in the pelvis, will also be taken into after consideration.

The peritoneum invests the whole ovary very intimately and tensely, with the exception of its inferior border, where the peritoneal layers are somewhat separated to allow of the entrance of the vessels and nerves. Under the peritoneum lies the *tunica propria* (albuginea) of the ovary, which possesses a fibrous structure, and in girls before the

age of puberty presents a smooth surface; but after menstruation has been established it appears more or less deeply furrowed or studded with scars, as also does the peritoneal covering.

As the peritoneum closely surrounds the ovary, and is prolonged at one side only in the manner described, there are formed a superior free border, two free surfaces, and a base resting upon the conjoined peritoneal layers. The free border is convex, well rounded off, and terminates externally in an obtuse point which lies close to the lateral pelvic wall about one inch to an inch and a half below the *linea arcuata;* internally, it passes directly into the ovarian ligament. The anterior convex surface is generally intimately attached to the abdominal end of the Fallopian tube, the posterior surface on the left side is connected in part to the rectum, on the right side to the peritoneal layer proceeding from the uterus to the lateral wall of the pelvis.

The parenchyma (called the stroma) of the ovary consists of a fibrous network, most of whose filaments run upwards towards the convex border, but part interlace irregularly. The meshes of the stroma contain a layer of spongy, vascular cellular tissue of varying depth, a multitude of nuclei and cells, and a number of globular bodies of various size—the so-called *Graafian follicles.*

These vesicles are the proper germ-forming organs of the ovary, and are progressively developed. In the new-born infant they are only microscopic cells, which gradually

increase in size and become more highly organised, until some of them at the commencement of puberty have attained the size of a small pea. In the normal ovary of a fully matured girl, their number is from ten to twenty, they are of various sizes, and perceptible to the unassisted eye; while a still larger number of them may be recognised by the microscope in different stages of development.

These vesicles are perfectly shut, globular sacs, enclosed in a very vascular tunic *(theca)*, which is formed of the thick cellular tissue of the stroma, and constitutes their external coat. Internal to this is a rather delicate membrane, also vascular, the internal surface of which is covered with pavement epithelium, and contains a yellowish albuminous fluid, the human ovum, and a cohesive granular layer resembling the cuticle *(stratum granulosum, membrana granulosa of Baër)*.

The *human ovum* is so small ($\frac{1}{12}'''$), that it is difficult to be seen by the naked eye. It is developed coetaneously with the follicle; in the mature condition, it is attached to the internal surface of the follicular wall, between the granules of the membrana granulosa, which are here accumulated round the ovum in great number and form the so-called *discus proligerus*.

The mature ovule consists of an opaque, globular body, the yelk, surrounded by a transparent membrane, the *zona pellucida* (afterwards the chorion). The yelk is composed of an albuminous fluid in which a number of opaque granules are suspended (yelk globules); it presents on its

periphery a small pellucid vesicle—the *vesicula germinativa* discovered by *Coste* and *Wharton Jones*—with a nebulous spot, *macula germinans*, first observed by *R. Wagner*, who believes it to be the point from which the further development of the ovum proceeds. The *zona pellucida* is a comparatively thicker membrane, which, owing to its transparency in microscopical examination, is represented as a clear ring with an internal and external contour surrounding the yelk.

The *Graafian* vesicles thus composed are embedded at different depths in the stroma; but in the progress of growth they move chiefly towards the free surface and upper convex border of the ovary; during which process it often happens that the superficial part of the albuginea and the peritoneal coat becomes atrophied, and the upper part of the follicle is seen glittering through the superficial surface of the ovary: sometimes it even rises above its level.

The ovary receives its vessels from the arteria *spermatica interna;* this artery gives off a large communicating branch to the *arteria uterina*, which runs upwards between the layers of the broad ligament, and enters the parenchyma of the ovary at its lower straight border. The veins make their exit at the same place; they form a large network between the two folds of the ligamenta lata, most of which open into the *venæ spermaticæ;* and also form frequent anastomoses with the vessels of the uterine ligaments, the uterus, and vagina. They are accompanied by numerous lymphatics, which are connected to the glands

surrounding the inlet of the pelvis. The distribution of nerves to the ovaries is scanty; some slender filaments from the *plexus renalis*, which accompany the vessels, are the only ones observed.

In conclusion, there is still an organ which we must mention in this place; it is situated beneath the ovary between the folds of the bat's-wing, but its physiological relation to the ovary is yet unknown; this is the organ of *Rosenmüller*, which has recently been carefully investigated by *Kobelt*,* and described under the name of the par-ovarium. According to *Kobelt*, in the mature condition it is an independent tubular gland above 1″ in breadth; it is formed by a peculiar transformation and exaggerated development of the Wolffian bodies.†

This anatomical description of the ovaries does not hold good until the accession of sexual maturity. But as soon as the sexual functions become perfectly developed, these germ-forming structures are transformed into excretory organs, that is, the ovales formed in them are gradually excreted; and this process is accompanied by an anatomical change, which will shortly be described.

* *Der Neben-Eierstock des Weibes, &c.* Heidelberg, 1847.

† In respect to the abnormal anatomy of the par-ovarium, Dr. Farre states that the so-called hydatids found at the border of the par-ovarium in most adult specimens are normal structures. The hydatids of later formations in the alæ vespertilionum are formed of the remains of the canals of the retrograde par-ovarium. He adds: "Within the walls of these canals is collected occasionally a considerable amount of fluid; and it is probable that this is the origin of those larger accumulations to which the term dropsy of the broad ligament has been applied." (J.C.)—*Cyclopæd. of Anatomy and Physiology*; pt. 49 and 50, p. 597.

§ II.

As the germ-forming organ, the ovary possesses the highest importance in the female economy; and especially at the time when the germs in the *Graafian* follicles are sufficiently matured for impregnation. This, we have already observed, takes place at the time of sexual maturity, when the ovary becomes an excretory organ by discharging the ovules contained in the follicles. The extrusion of these bodies is effected by simple rupture of the follicle, and is accompanied by a group of symptoms which are known by the name of menstruation. The discoveries of recent times, and particularly those of *Negrier*, *Gendrin*, *R. Lee*, *Montgomery*, *Paterson*, *Bischoff*, *Raciborsky*, *Courty*, and *Pouchet*, have demonstrated that the essential object and design of menstruation is the evacuation of the *Graafian* follicles; while in former times the hæmorrhagic discharge used to be considered the principal part of the process, and was looked upon as a kind of depurative act. According to our present views of the subject, menstruation is the result of a peculiar irritation of the nervous system caused by the maturation of the ova, which manifests itself by a periodical hyperæmia in the genital organs. This hyperæmic condition produces a more rapid and copious secretion of the fluid contained in the *Graafian* bodies, resulting in the rupture of the

most developed and prominent follicles, which is accompanied by hæmorrhage from the uterus and sometimes from the tubes, and in most cases by tumescence and increased secretion from the mucous surfaces of the other genital parts. The concomitant symptoms of congestion in the ovary constitute the principal part in the whole process, while the hyperæmia in the rest of the sexual apparatus is of more or less secondary importance.

It results from the foregoing facts that the whole phænomena of menstruation, and the hæmorrhage from the uterus also, are related to a definite development of the ovaries, and especially to the maturation of the follicles; and, consequently, women, without, or with undeveloped ovaries, or without follicles, cannot menstruate — a fact which is confirmed by experience. For in cases of congenital absence of the ovaries, or in which they have been artificially removed, no menstrual symptoms are observed; the menses are also suppressed when the development of the follicles is arrested by certain diseases or by old age. On the other hand there are certainly cases in which perfectly developed follicles are found in the ovaria of women who have suffered from amenorrhœa during life, in whom the presence of the *Graafian* bodies did not suffice for the production of menstruation. Such instances, which are most frequently met with in certain blood diseases (particularly in chlorosis), or in individuals otherwise reduced, and also in retarded bodily development, prove that a healthy state of the blood, normal excitability

of the nervous system, and a corresponding corporeal development are indispensable conditions for the production of the local menstrual congestion in the genital apparatus.

When all the essential conditions exist, females begin to menstruate at a definite period of life (most frequently in the fourteenth year), which is the first important evidence of sexual development, and characterises the commencement of the so-called age of puberty or sexual maturity. This phase of life is commonly marked by rapid growth both of mind and body, and particularly by a more considerable development of all the sexual organs; in many women it produces a perceptible general revolution, the object of which is the continued reproduction of germs, their periodical discharge from the ovary, and the impregnation and nourishment of the living germ.

If we examine somewhat more minutely the process of the dehiscence of the follicles, the following facts may be observed: the follicles, as we have previously shown in the anatomical part, are embedded at various depths in the stroma of the ovary, some of them so superficially that they rise above the level of the ovarian surface and form small semi-transparent fluctuating prominences; hence it is evident that their rupture must be effected with varying degrees of facility, and that the hyperæmia must vary considerably in its intensity and duration at different times, so as to effect its purpose. This has also been demonstrated in post mortem examina-

tions where the congested condition is found so intense that it causes considerable hæmorrhage in many of the follicles, and extends over the adjacent surface as far as the peritoneal coat, while in other instances it is mostly confined to one follicle. The dehiscence of the several follicles may continue for an indefinite time after the commencement of menstruation. Previously to the bursting of the *Graafian* vesicles, the hyperæmia is attended with greater or less softening of the follicular walls, and sometimes with a bloody or fibrinous exudation. The rupture always takes place at the most yielding part, involving a wound of variable extent. This is not very large in the case of thin, and superficially-situated follicles, but in those placed deeper it is of greater extent. According to my own investigations, the wound is sometimes so small that it will only permit the passage of the head of a darning needle, while in other cases it is from 2‴ to $2\frac{1}{2}$‴ long, and generally causes a hæmorrhage which, however, only serves to agglutinate the edges of the wound.

As soon as the rupture is effected, the fluid contents of the vesicle, and with them the layer of cells surrounding it, are discharged; and in order to accomplish their further development they must be conveyed from the superficial surface of the ovary into the Fallopian tube.

Let us now inquire *whether menstruation is the only mode by which the Graafian follicles can be evacuated, or whether this may be accomplished in any other way.* There can scarcely be a doubt that every time the ovaries

are congested, if the hyperæmia reaches the necessary degree of intensity, symptoms similar to menstruation may be produced; and several post mortem examinations have shown that the dehiscence of the follicles may be the result of pathological congestions, while art sometimes succeeds, by the choice of proper means, in producing symptoms of menstruation. But under all circumstances it must be granted that a persistent accumulation of blood in the ovaries similar to the menstrual hyperæmia is the only means by which such results can be produced; in general this must occur very seldom, and we would particularly mention in this place that they can least of all be occasioned by the transient sexual excitement caused during coition. This fact is especially adverted to, because the most widely disseminated explanation of the discharge of the *Graafian* follicles was that the ovules were expelled by the female during coition in a similar manner to the emission of the seminal fluid in the male.

After its evacuation the ruptured follicle is without use in the female organism, and it then undergoes a reductive metamorphosis. In consequence of the previous hyperæmic condition and the consequent softening and irritation of the follicular wall, the next change is a greater or less thickening and puffiness of the internal membrane which gives it a plicated appearance, this is more marked in proportion to the degree of shrivelling of the external tunic. Soon after its evacuation, the follicle always presents a cavity, the greater part of which is filled by the plicated,

hypertrophied internal membrane, and the remaining space contains a little blood or fibrinous exudation. The small wound caused by the dehiscence generally heals in the course of some hours or days, and forms a corresponding cicatrix, which at first appears coloured by the unabsorbed blood pigment, but afterwards becomes paler. As the result of these changes a body is found in the ovary which has a different size and colour, corresponding to the size of the original follicle, to the degree of hypertrophy of the internal coat, and to the properties of the exudation, and after an indefinite time it undergoes a reductive fatty metamorphosis, and is rendered fit for absorption. In those cases where there is considerable infiltration of the follicle, this fatty degeneration is most distinctly perceived during its involution; after being subjected to this process, the remains of the follicle acquire a more or less distinct yellow colour, hence the designation of *yellow bodies (corpora lutea)*. As the process of involution is most marked, and greater hypertrophy of the evacuated follicle is observed in those cases where conception has taken place, the formation of those bodies has a peculiar relation to pregnancy. But it may be remarked that the process of hypertrophy, which is observed after conception in the organs of generation, certainly prevails also in the ruptured follicles and generally leads to the formation of perfectly developed *corpora lutea;* but although the remains of the *Graafian* vesicles in the original state are very small as a rule, they have the same significance as the *corpora lutea*

which are found in pregnant women: in some rare cases of non-pregnancy I have seen these yellow bodies as large as a cherry, and exquisitely developed. The *corpora lutea* in the unimpregnated condition commonly appear as small, grey or blue-coloured bodies, at first presenting a small cavity with plicated walls, which degenerates in course of time; and then the walls shrivel, leaving a small portion of cicatrised tissue.

Since menstruation is a phenomenon which returns periodically during a long series of years, and the number of mature follicles in the ovary is generally very small, we are obliged to assume that there is a constant periodical regeneration of these organs during a certain period of life: and analogy with the reproduction of ova demonstrated in animals speaks in favour of this theory.

The perpetually-recurring laceration of the ovarian surface by repeated menstruations produces a multitude of cicatrices corresponding to the number of evacuated follicles, which is easily demonstrated in the dead body. This is particularly distinct in old women, in whom menstruation has been long suppressed and atrophy of the ovary has begun; in these cases the great number of callous cicatrices give it a rugged, mulberry-shaped appearance. The cicatrices are in themselves a convincing proof of the nature of menstruation; for in some cases of young girls I have succeeded, after death, in discovering a correspondence between the number of the cicatrices and the menstruations which had taken place.

II. PATHOLOGY AND DIAGNOSIS OF OVARIAN DISEASES IN GENERAL.

§ III.

The anatomical and physiological conditions of the ovaries which we have now described also furnish the most direct interpretation of their pathological phenomena.

In the production of the menstrual change, to which we have alluded, there is no organ in the female body concerned to so considerable a degree as the ovary. It is the source of the catamenial activity, and its function is the expulsion of one or more ova. This process is introduced by a vascular congestion which extends simultaneously to the other genital organs, and causes the well-known phænomena of menstruation. When irregularities of this function occur they naturally show themselves by pathological changes in the ovary; when a large number of patients, afflicted with ovarian disease, are examined, it will be found that in the majority of cases the origin of the malady may be traced back to derangement of a catamenial period. The follicles are the first to sympathise with these abnormal conditions; and consequently a diseased condition of these structures

is not a rare occurrence—most frequently in the forms of apoplexy, dropsy, and inflammation. The last-mentioned affection extends in some cases to the surrounding stroma and the integument of the ovary, when partial oophoritis and peritonitis are produced. These diseases, although proceeding from a small inflammatory focus, often spread extensively: the parenchymatous oophoritis, on the contrary, with the exception of the puerperal form, is generally limited to a circumscribed part of the stroma; while inflammation of the whole ovary, apart from the puerperal condition, is very rare indeed, and manifests phenomena peculiar to itself, which will be afterwards taken into consideration.

In the puerperal state quite a different state of matters prevails; the ovaries are often diseased in their totality, either as an integral part of the genital apparatus, or under the influence of a general blood disease. Consequently different kinds of oophoritis are accompanied by various forms of puerperal metritis, while metastatic processes also occur. In some cases it happens that the disease thus induced fixes itself in the ovary after its suppression in the neighbouring structures, continues there, and increases in intensity. A similar condition also prevails in the diseases excited during a menstrual period; these, in their subsequent progress, acquire a certain individuality, and pass through their various metamorphoses constantly, although in particular instances considerable fluctuations may always be recognised in the process of development at the time of menstruation.

The relations of menstruation to certain diseases of the ovaries explain why they are observed chiefly at the time of sexual maturity, being rarely met with before that epoch, while they occur in the years of decrepitude only when their germs have been implanted at an earlier period. The only diseases we have observed previous to the age of puberty are some follicular enlargements (particularly simple serous and adipose cysts), and even these, as we have already stated, are very rare. Their occurrence is explained by the progressive development of the follicles which takes place even in childhood, and which, under influences unknown to us, may become pathological during this epoch.

But besides the puerperal diseases adverted to there is an extensive series of pathological conditions of the ovaries which have no relation to menstruation, and are the result partly of local, partly of general, influences. Amongst these are included malformations, dislocations, the different forms of cancer, and others which originate from sympathy with the adjacent structures; for instance, many inflammations, cancerous deposits, &c.

Of the diseases of *malformation* and *imperfect development*, the absence of the ovaries, and the persistence of their fœtal condition in mature age are most worthy of mention; on the other hand, the excessive development, hypertrophy without any perceptible changes of texture, and malformation of the ovaries, of which no further notice is taken even in special treatises, appear of secondary im-

portance in a practical point of view. The study of simple dislocations of the ovaries, and particularly of hernia, has been of more service to pathology in recent years; and we will not neglect to include what has been made known upon the subject in our special consideration of it.

Amongst the forms of disease induced by constitutional maladies, puerperal inflammations and cancerous deposits are the most worthy of observation; and both will be considered at length in their special departments. Respecting the last disease we will only remark at present, that cancer in the ovary is observed under the most widely different forms, which is owing partly to the disposition of the ovary to undergo peculiar changes of the stroma, partly to the circumstance that the cancer is developed at one time primarily, at another secondarily, in a healthy or in a degenerated ovary.

In connection with the structure of the ovarian tissue, the degeneration of the *Graafian* follicles before-mentioned, the formation of secondary cysts, alveolar softening and fibrous thickening of the stroma, the formation of fibrous, osseous, and cartilaginous tumours in the tissue are the most worthy of notice. We have to mention a peculiarity of all these pathological processes, with the exception of the last-mentioned, that they are capable of colossal development, especially the compound cysts and alveolar degenerations, which do not attain similar dimensions in any other organ.

In a negative sense it is also interesting to observe,

that, notwithstanding the frequent occurrence of cancer in the ovary, tubercle is not met with in that organ; although in intense peritoneal tuberculosis in the pelvic cavity we believe we have discovered some tubercular granules in the stroma of the ovary. Still this is a very secondary symptom, upon which we can lay no especial value as yet; and on that account we shall not describe tuberculosis of the ovaries in our special part, as has been done by other authors in a way irreconcilable with the present state of pathological anatomy.

§ IV.

It still remains, for the purpose of diagnosis, to take a careful view of *several changes in the adjacent parts* which always accompany any great enlargements of diseased ovaria. Of these, the *displacements* and *tractions* of the *surrounding structures* must be mentioned first.

It has already been stated in our anatomical description that all free ovarian tumours are pushed by the broad ligaments back upon the posterior pelvic region, between the rectum and the uterus, more or less into the space of *Douglas;* and are therefore in general found in the median line of the pelvis. In consequence of this relation of these structures, the uterus, particularly its upper part, is generally anteverted, and is placed more or less obliquely.

As the ovarian tumours increase in size the dislocation commonly becomes more considerable, the uterus is pressed upon the pubic symphysis, or situated in one or other of the antero-lateral parts of the pelvis, and is also subject to traction from above. In consequence of this tension, the walls of the uterus are more or less lengthened, and often become attenuated. The same condition causes a corresponding change in the relations of the vagina, which is also drawn forwards and upwards; the vaginal floor is obliterated in an equal degree, and the cervix uteri is shortened. In extreme cases this condition of these structures obtains to such a degree, that the vaginal arch becomes conical superiorly; and the os uteri passes directly into the vaginal floor, without any projection of its lips being perceived. These phænomena, however, undergo essential changes in certain cases; thus, in wide pelves, in cases where the ovaries are firmly adherent to the surrounding parts, or in enormous ovarian tumours which fill almost the whole pelvic space and are prolonged inferiorly in the shape of a cone, the pouch-shaped folds of the peritoneum between the uterus and posterior pelvic wall are drawn downwards, by which the space of *Douglas* in particular is considerably lengthened inferiorly. In these cases quite an opposite dislocation of the pelvic organs in some measure prevails; the posterior wall of the vagina is drawn forwards and downwards, so that it is prolapsed far beyond the external genitals. We have seen this form of prolapse of the posterior vaginal wall increase to the size

of a child's head in cases of large and small ovarian tumours. From reasons easily understood prolapse of the rectum is sometimes combined with the former condition, which may take place in tolerably large ovarian tumours deeply wedged in the pelvic space.

In consequence of prolapse of the vagina, the lower part of the uterus is generally drawn downwards so far, that a great part of the cervical portion may protrude beyond the genitals. In this case the uterus is generally subjected to traction in two directions, namely, by the broad ligament superiorly and by the vagina inferiorly; hence the uterine walls are considerably lengthened, a circumstance pathognomonic in such cases.

This twofold relation is commonly met with; but in some instances the uterus lies beneath, or quite behind the diseased ovarium. This is often the case in cystic growths confined to one side; they rise above the uterus and press it downwards, thus causing a considerable increase in its circumference. Under these circumstances not only the lengthening but also the elevated position of the uterine body is wanting; on the contrary we find it lying deeper and even atrophied. In many instances the ovary appears to have ultimately suffered more or less considerable torsion on its axis; and then we observe the corresponding tube running to the posterior surface of the ovary. It also happens, that the intimate relation of an enlarged ovary to the uterus is partly broken off in this way; the peritoneal attachment of the ovary to the broad ligament and the

uterus is drawn out to a long small tendon, which allows freer movement to the tumour and does not pull upon the surrounding parts. Many of the symptoms now detailed are also absent in cases where compound ovarian tumours become closely adherent to the uterus, either by inflammatory products, or by the transference of cancerous deposits, or by lateral alveolar growths, when all the pelvic organs form an inextricable entanglement. In such circumstances the uterus is often embedded in the centre of a diseased mass, and distorted, or even partially destroyed.

We have before stated that the ovary stands in a peculiar relation to the adjacent structures in the puerperal state. During pregnancy the ovaries ascend with the uterus out of the pelvic cavity, and in proportion as the lateral peritoneal folds of the pelvis are taken up by the growing uterus, they approach closer and closer to it, until they are found in contact with the lateral surfaces of the evacuated uterus, in the superior pelvic space. When the ovaries enlarge in this situation, peritoneal adhesions commonly take place during the puerperal state; the diseased ovaries are retained in the superior pelvic space more or less laterally situated; and by this state of matters several of the earlier detailed dislocations of the deep pelvic structures are produced. But it must not be forgotten that this condition prevails only at an early period of the puerperal state, since the ovaries in its after course return sooner or later to their normal condition, according to the extent of space in the pelvis.

The dislocation of the small intestines has already been considered in our anatomical observations, and it only remains to touch briefly upon the relation of ovarian tumours to the bladder and to the vascular and nervous trunks in the pelvic cavity. Ovarian tumours only come into direct contact with the bladder when they have attained a great size; but small tumours press indirectly upon the neck of the bladder by pushing forward the uterus, often to such a degree that permanent ischuria is produced. The neck of the bladder is also often displaced by the uterus being pulled upwards, and the effect of this is, that the patients lose command of the sphincter of the bladder, and suffer from a frequent desire to micturate, or from enuresis. When the ovarian tumours become so large that the pelvic space is contracted in all directions, considerable lateral dislocations of the bladder may be caused, although it is seldom that much difficulty in micturation is caused by this condition. Lastly, it is obvious that small hard ovarian tumours in particular, which are closely adherent to the posterior pelvic wall by peritoneal exudations, will make the passage of the urine difficult or almost impossible by compressing the ureter; and, consequently, the well-known symptoms of retention of urine in the ureters and the kidneys are produced.

It is also evident that in all cases where firm ovarian tumours are pressed deep into the posterior pelvic space, the evacuation of the rectum is rendered more or less difficult or even impossible, so that many very distressing

and dangerous symptoms proceed from this cause. However intimately many ovarian tumours may adhere to the pelvic and abdominal walls, however large their size and however great the pressure they produce on the vascular and nervous trunks in the pelvis, still, in most cases, where no intimate peritoneal adhesions have taken place, particularly in the pelvic portion of the tumour, no remarkable obstacles to the circulation and no symptoms of compression of the nerves are produced. Indeed, women with ovaries containing from fifty to eighty pounds of fluid and upwards, frequently do not suffer from varicose veins, or œdema of the feet, or from any perceptible disturbance in the motion and sensibility of the lower extremities. On the other hand, when peritoneal adhesions take place at the inferior part of the tumour, or where wedging or close impaction of solid ovarian tumours occur in the lower pelvis, a very insignificant tumour may cause very severe symptoms of impeded circulation and nervous compression, which usually occur exclusively or chiefly in the lower extremities, and show themselves by more or less extensive œdema, varicose veins, a feeling of heaviness, and even acute neuralgia. Where extensive œdema or general dropsy supervenes upon ovarian tumours, they are generally to be regarded as the expression of a supervening blood disease, which is certainly favoured by the ovarian malady, but in many cases it may be an accidental concomitant, and may even disappear while the local disease remains. The cachexy, which

causes the dropsy, is often of a malignant character, and expresses itself locally by cancerous deposits; and when ovarian tumours occur in combination with very extensive dropsy, they always cause suspicions of alveolar degeneration or cancerous formations; although in such cases no decided conclusion can be come to, because these affections of the ovaries may occur without dropsy.

We will only remark, in conclusion, that when ovarian tumours have increased to a very large size, the organs situated in the superior abdominal space, particularly the stomach, the spleen, and the liver, may be very much displaced upwards and backwards, and even the thoracic cavity may be more or less contracted by the elevation of the diaphragm, whence an important series of symptoms are produced which will be afterwards detailed.

§ V.

Besides these purely mechanical relations of ovarian tumours to the adjacent structures, they have also other, no less important, pathological influences upon the neighbouring parts and upon the whole organism. The different peritoneal adhesions with all organs which come into contact with the diseased ovaries are next to be considered. These most frequently comprise the pelvic organs, particularly the tubes, the broad ligaments, the uterus, the rectum, seldom

the bladder, and still less frequently the superjacent small intestine. In tumours situated higher, adhesions are formed with the large intestine, the omentum, and the anterior abdominal wall. We have found enormous tumours intimately adherent to the transverse portion of the colon, and even to the stomach, and to the under surface of the liver, while the small intestine was almost always free from adhesions. These adhesions, however, are no necessary phænomena; even in great enlargements they are absent at least as frequently as they are present; a very large tumour may be connected with the uterus only by means of a thin pedicle, being quite free in other respects. The adhesions are the result of peritoneal inflammations, generally originating in the diseased ovaries; they are more or less intimate, short, and tense, or they may be elongated in the form of filaments or bands, which in time become highly organised and present a solid and often rather vascular structure. Under favourable circumstances these adhesions may retrograde in course of time, and an immoveable tumour may become perfectly moveable again.

Besides these adhesions there are also other more intimate connections of the different ovarian tumours to the adjacent structures, the result of perforating inflammations. This process may originate in any ovary whose contents are more or less fluid; it is generally preceded by an adhesive inflammation which spreads to the adjacent parts, and the result is that inflammary softening and per-

fusions take place in one or several places. If it does not proceed to adhesion of the adjacent structures, a free evacuation of the ovarian contents may take place into the abdominal cavity followed by its usual consequences, and spontaneous ruptures may also occur in cyst formations.

Apart from these pathological attachments, the natural connection of the diseased ovary, that is, the ovarian ligament, also presents some abnormal relations in different ovarian enlargements. This is especially the case as regards the length and breadth of the connecting band. Some tumours are attached to a pedicle scarcely an inch broad and several long, while in other cases the ovarian ligament embraces a great part of the tumour and forms a short, tense connection with the different adjacent organs. In the first case many ovarian tumours acquire such a degree of moveability that they can be raised by external pressure from the superior pelvis to higher than the navel. When a tumour attains a very great size, it is obvious that in consequence of the limited space its moveability becomes impossible even in favourable conditions of the ligament.

Notwithstanding the enormous size which some of these forms of disease may attain, their gradual formation does not exhaust the system in proportion to their size; their colossal development is not incompatible with luxuriant corpulency and comparative health. But the reverse happens when they grow rapidly, are rich in organic matters, and when they occasion severe inflammatory attacks; in this case their rapid growth has a very

exhausting effect, and is consequently of great danger to the system.

Functional disturbances of diseased ovaria are perceived in very few cases, amenorrhœa takes place as a necessary consequence only when both ovaries are so extensively affected that degeneration of the follicles sets in. On the contrary, when only one ovary is diseased, which is the case in the majority of women, and other conditions are favourable, menstruation continues uninterruptedly. But amenorrhœa often occurs when the follicles are perfectly healthy, and the cause of these anomalies may depend upon very different states of the female economy quite independently of ovarian disease. Irregularities of the catamenia are, therefore, liable to very different interpretations, and the information they afford is of but little value in the diagnosis. As regards sterility, also, we must remark, that it is a necessary consequence only when both ovaries are affected, while even with very extensive degeneration of one organ pregnancy is not unfrequently observed.

Respecting the *pain* in ovarian diseases there is nothing peculiar, because the sensibility of the ovaries is very imperfectly developed, of which we have convinced ourselves in operating on the living body. The pain, which, however, is often present, generally proceeds from the sympathy of the peritoneum and the neighbouring organs. Sometimes it is the expression of traction upon the peritoneum, particularly in rapidly growing ovaries; at other times it is the effect of inflammatory affections of this part. As to

the adjacent organs, they are drawn into sympathy, partly by compression, partly by traction, partly by participation in the congestive and inflammatory conditions; hence an extensive series of distressing feelings are occasioned. We not unfrequently see the uterus and even the breasts sympathetically affected; pains, similar to those of labour come in the former, and swellings often take place in the latter, and in rare cases we have had an opportunity of observing a secretion of milk.

As regards the further course and the events of ovarian diseases, they deviate too much in the different affections to permit of being brought together into a general description, and we will, therefore, leave what we have to say upon them to the special part of our observations.

§ VI.

EXPLORATION OF DISEASED OVARIA.

In their natural size and situation the ovaries are not generally accessible to palpation, and even a moderate enlargement cannot be felt so long as they remain in their usual position. But enlargements of no great bulk are easily detected, when the ovary glides into the space of *Douglas*, which we have before stated is not seldom the case. In these conditions the tumour situated behind the uterus may be reached through the vaginal floor or the rectum with

different degrees of facility, and when the last mode is adopted essential assistance may often be given in the examination, by making pressure upon the inferior abdominal region. The diagnosis, however, is not completed by ascertaining that a tumour exists in this region.

The internal as well as the external examination must be made with the patient in the dorsal position, and the abdominal integument relaxed, and if possible the bowels and the bladder should be empty.

In this way we may often succeed in detecting solid ovarian tumours no larger than a walnut, by making deep pressure upon the inferior abdominal region, particularly in women who have had children, and whose abdominal parietes are thin and flaccid. But when the abdominal integuments are tense and thick, and the tumour cannot easily be reached from the rectum or the vagina, it must be of considerable size and solid consistence to be felt with great minuteness through the abdominal walls.

First of all it is important to prove that the tumour does not belong to the uterus. However distinctly, in many cases, this may be made out by the ordinary exploration, still this does not suffice in the majority of instances, and then we may have recourse to the application of the uterine sound with great advantage. The use of this instrument indicates to us the position and size of the uterus, and its general relation to the tumour present.

Most frequently the cyst formations of the ovaries

are found in the space of *Douglas*, and when this is the case it is essential to detect fluctuation during the exploration. In small cysts situated higher up, this is generally impossible, and it is only by great experience in exploration that one is able to obtain probable evidence of the existence of a cyst, from the fact that while strong pressure is made upon the tumour through the inferior abdominal parietes, the cyst as felt through the vagina becomes gradually more defined and elastic. In large or deeply-seated cysts, on the other hand, when we can fix the tumour both externally and internally between the fingers, or can trace it through the rectum, we not unfrequently obtain distinct evidence of fluctuation. Sometimes it happens that ovarian cysts descend so deep into the pelvic cavity that they protrude below the middle of the vagina, and can be felt through it in a great part of their extent.

Ovarian tumours, situated in the superior pelvis, as when they occur primarily at the commencement of the puerperal state, or secondarily in consequence of the enlargements of tumours which were previously deeper seated, can be reached from the vagina and rectum with difficulty, and often not at all; in this case we are often obliged to confine ourselves to an examination of the external abdominal region only, and must rest satisfied by ascertaining that a circumscribed resistance and pain greater than natural exists in the corresponding region. The uncertainty of this exploration when the tumour is

inconsiderable is easily seen when we reflect that the ovaries are entirely covered by the convolutions of the bowels; and therefore the application of the uterine sound is especially advisable to aid the diagnosis, by preventing us from mistaking uterine diseases for those of the ovaries, which may easily happen in consequence of the frequent occurrence of lateral deviations of the uterus.

The larger the tumour is the more distinctive are the facts made out by exploration: in extraordinarily great tumours in the abdominal cavity, which exceed the size of a full pregnant uterus, we can even conjecture by the external appearance that we have to do with an ovarian disease. In such cases also it is of the first importance to examine carefully what dislocations of the pelvic structures have taken place, and particularly all the relations of the uterus, the vagina, the rectum, and the bladder, as they are described in the foregoing section. It frequently happens that we find the uterus which is pushed forwards, from one to three inches longer than it is normally; and on introducing the uterine sound we distinctly feel it through the abdominal integument, and the uterus more or less high above the pubic symphysis. Not unfrequently we find the uterus pressed to one side of the pelvis, and situated obliquely. In consequence of the compression of the uterus, the use of the sound in these cases often requires great expertness, particularly when it is difficult or impossible to reach the os uteri; on the other hand the application of the

sound is easier when the lower portion of the uterus is drawn down and is visible externally: in this case, too, the measurement by the instrument always shows the organ to be considerably lengthened.

§ VII.

Large ovarian tumours are always situated on the anterior or lateral regions of the abdomen, and displace the bowels to a corresponding extent. We, therefore, take hold of the place affected always close to the diseased ovary through the abdominal walls; and careful palpation of it may often give us important information respecting its texture and other properties. Simple cysts of the ovaries, when a large segment of them lies under the abdominal wall, invariably show a distinct fluctuation, which is always more perceptible as the size of the tumour increases; some, so much so, that simple cysts of the size of a pregnant uterus fluctuate most distinctly in all directions on the gentlest percussion. The distinctness of the feeling of fluctuation informs us of the thickness of the walls, while in compound tumours the extent of surface it occupies furnishes some information as to the size of the separate cysts. Small or deeply-embedded cysts do not present the feeling of fluctuation; nor do the alveolar tumours, unless their separate segments are as large as a fist, at least, and are situated superficially.

As ovarian tumours in general present a more or less round form, a segment of the anterior half only comes into contact with the abdominal wall, while the lateral parts remain covered by the intestines. This condition undergoes a change only when the whole inferior abdominal space is filled by the tumour, and the entire bowel is displaced backwards and upwards, whence various percussion sounds originate. In moderately large tumours the percussion sound is dull only from the centre of the tumour downwards to a variable extent, while towards the periphery it generally passes into the clear tone of the bowels; but in very large tumours the whole antero-lateral abdominal region gives a perfectly dull percussion sound, which according to the size of the tumour may extend to the ensiform cartilage of the sternum and high into the hypochondrium, so that the tone of the bowel is heard only in the postero-lateral abdominal region and above the common epigastric region.

In some cases ovarian tumours are so flaccid, and so little amenable to palpation, that the results obtained by percussion are the most important points in establishing the diagnosis. But it is necessary to act with great prudence, and to test the permanence of the percussion sounds in different positions of the patient and at different times, in order to avoid mistaking ovarian for other diseases.

In solid tumours fluctuation is naturally absent, although the results of percussion are the same. This

kind of ovarian tumour, when of moderate size, has a considerable degree of moveability, so much so that some of them admit of being moved into every part of the abdominal cavity. In these cases it is necessary in raising the tumour to explore the uterus at the same time, so as to be able to follow the motion communicated to this organ. In other cases the upper free part of the tumour only is moveable.

If no inflammatory attacks supervene, ovarian tumours are generally not painful to the touch; and, therefore, a minute external exploration can generally be made without pain to the patient, and it may furnish very important diagnostic information respecting the form, uniformity of surface and resistance, and also as to the opposite conditions.

The form of the abdomen corresponds with the shape of the tumour; it is commonly more or less arched, often uneven or sloping on one side, or lastly it is in uncommonly large tumours cask-shaped, the false ribs being pushed outwards and upwards. The distension of the abdominal walls often becomes so great that the umbilicus opens and the belly hangs down, and in the sitting posture rests upon the thighs. The abdominal integument is glistening, tense, traversed by dilated veins, and generally œdematous in its lower part. In these cases not only considerable dislocations of the abdominal organs but also of the thoracic viscera take place, which may then be detected by physical examination.

When peritonitis has occurred and left the anterior abdominal wall rough, or when the ovary is rough on its anterior surface and at the same time somewhat moveable, a more or less considerable friction sound is produced by the two surfaces rubbing against each other, which may be perceived by laying the hand on them, as well as by the ear. In some cases too in which large vessels are present in enormous ovarian tumours the sounds of the circulation may be heard by auscultation, which are analogous to those heard in the pregnant uterus. *Dr. Chiari* showed to the *Gesellschaft der Ärzte*, in Vienna, in the month of July, 1851, a case of this kind of supposed cancer, in which it was proved that a very intense blowing sound in the abdominal integument had its seat in the epigastric artery. Although I have paid great attention in recent years to this subject, I have not succeeded in any case, although I have carefully auscultated about thirty large ovarian tumours, in detecting any sound of the circulation; and, therefore, this phænomenon, which has also been observed in various kinds of pelvic tumours, must occur very rarely; in the case of uterine fibroid tumours, where such sounds are not rare, it is a phænomenon not altogether without importance in the diagnosis.*

* At a recent meeting of the Obstetrical Society of London, Dr. G. Hewitt exhibited an ovarian or abdominal sound which he had invented for the purpose of carrying out an internal examination of suspected ovarian tumours, with the view of rendering the diagnosis of their nature, position, and composition more certain. The apparatus consists of an ordinary canula and trocar, and a graduated probe of flexible metal, fourteen inches or more in length, rounded at its extremity, having a diaphragm of india rubber fixed in the shoulder of the canula to prevent any escape of the fluid. Dr. H. mentions many advantages obtainable by its use, and

§ VIII.

ETIOLOGY OF OVARIAN DISEASES.

We have previously stated that several diseases of the ovaries and some follicular degenerations in particular are peculiar to certain stages of life, that is, they are not often developed before the age of puberty, or in the years of decrepitude. However, they occur in isolated cases in childhood, even in fœtal life, and when once their germs are implanted, they are often further developed in old age. We also meet with inflammatory diseases of the ovaries principally in the bloom of life, because they are almost peculiar to the menstrual and puerperal periods. Foreign formations, on the other hand, and some alterations of the stroma, are observed at all periods, with the exception of that before puberty, but the majority of them belong to somewhat advanced age; nevertheless, colossal cancerous formations sometimes occur in the ovaries of young persons.

states that the anticipations formed as to its utility have lately been fully verified in a case under the care of Mr. S. Wells, in which the sound was used by him. For an excellent woodcut of the sound, with description and use, see *Lancet*, April 9th, 1859. J. C.

In a case of ovarian tumour in which Mr. Spencer Wells proposed to use the *écraseur* if the sac proved to be non-adherent, he made an exploratory incision, but instead of finding the sac at once, as generally happens, some folds of small intestines distended with gas appeared in the wound. This case suggests a very important precaution, for had the cyst been tapped without a previous exploratory incision the trocar would have gone through a fold of intestine. It may be remarked that if the dulness on percussion had not been amply verified by Dr. Routh, Dr. G. Hewitt, and others, the occurrence of so unaccountable a phænomenon could scarcely have been credited.—*Medical Times and Gazette*, January 2nd, 1858. J.C.

If we exclude some inconsiderable cysts and slight peritoneal inflammations, ovarian diseases are on the whole very rare: thus in from thirty to forty female bodies (with the exception of puerperal women) we scarcely meet with any well-marked examples.

Of constitutional conditions, with the exception of the cancerous dyscrasia and the blood disease which occurs in the puerperal state (puerperal fever), none exhibit any definite relation to ovarian maladies, and scrofula and tuberculosis in the ovary evidently play as significant a part as the acute blood diseases, for instance typhus, the exanthematous affections, &c. Even cancer in the ovary, it is very probable, is frequently to be considered as a local degeneration of a vegetative process at first without danger; it therefore loses the importance of a constitutional affection. Chlorosis, too, which stands in immediate relation to the sexual system, does not appear to produce any remarkable changes in the ovaries, unless we give especial prominence to those cases where this cachexy is combined with a retarded development of the whole body and the sexual organs, and in which the ovaries are always, or at least very frequently found, in an arrested condition.

Other points of constitutional disposition to disease in the ovaries are also not unknown to us, but all that has hitherto been contributed by physicians upon this subject must still be regarded as hypothetical. In particular we cannot find in the early or late appearance of menstruation, in celibacy, onanism, or excess in coition,

any relation with the frequent diseases of the ovaries. We find these diseases in all circles of society, in the married and unmarried, in blondes and brunettes, in the luxurious and in the thin, and also in every form. Only the puerperal condition and the time of menstruation, both physiological states, as we have before mentioned, apparently increase the disposition to them to a certain extent, because at these times the ovaries are placed in conditions which makes them more sensitive as it were to external and internal injurious influences. The opinion, that one or the other ovary is principally disposed to disease, has already been exploded.

§ IX.

Of the exciting influences there are some which admit of no doubt. Most frequently these are cold, excesses in coition, vehement mental emotions, and bad diet during menstruation. In cases where they act injuriously on the ovary they are often accompanied by suppression of the uterine menstrual secretion, although this is no necessary precursor; on the contrary, catamenial disturbances often occur which have no injurious influence upon the ovaries. Why this is the case in one individual, while in a second the same malady causes a serious oophoritis, is still unknown to us.

The ovary is also often sympathetically affected by injuries which are immediately connected with the uterus, or the primary uterine disease spreads by contiguity to the adjacent ovary; thus we have seen violent oophoritis succeed slight traumatic injuries, or injections into the uterus, so in metritis and in uterine cancer the diseased process is often extended to the ovary.

A great number of chronic ovarian diseases come on so insidiously that the patients are not at all conscious of the first moment of attack, and do not become aware of it until the disease has made some progress: in these cases we generally remain entirely in the dark as to the exciting cause.

As to the affinities for combination and exclusion which exist in diseased processes, we have only this peculiarity to remark in ovarian diseases—that when ovarian tumours become so large as to impede respiration they do not often combine with tuberculosis; and anæmia caused by the rapid growth of many ovarian tumours does not often give origin to diseases with fibrinous exudations; moreover, as a general rule, other acute blood diseases do not often occur in such individuals. Cancer of the ovary follows the same course in this relation as it generally follows when occurring in other parts of the body. As regards the power of combination of the different ovarian diseases among each other, experience shows that different diseases may occur simultaneously in the ovary; and that it is often possible to study in a single diseased ovary the

greater part of the forms of disease which take place in this organ. Respecting tuberculosis, we have before stated that it does not appear to have been demonstrated with certainty in the ovary.

The etiology of ovarian diseases may be statistically illustrated by a reference to the tables of Scanzoni, West, Chéreau, and S. Lee. According to the experience of these authors, from observations made during life on 415 cases, the right ovary was the seat of the disease in 201 instances, the left in 148, and both ovaries in 66.

In 76 cases, however, observed after death by Drs. Scanzoni, West, and Mr. R. Lee, 26 were situated on the right side, 23 on the left, and on both in 26 cases. In 1823 cases of disease of women carefully noted during life, Dr. Scanzoni found that 97 were suffering from ovarian tumours, but only 41 of these tumours were verified by post mortem examinations. To these 41 cases Dr. West adds 19 of his own. From these 60 cases we find that 15 were simple cysts, 1 fat cyst, 23 compound cysts and cystosarcomata, 10 colloid tumours, and 2 cysto-carcinomas. The ages at which the disease was recognised were as follows in

Dr. Scanzoni's	90	cases	70	were between	18—40 years of age.
Dr. West's	68	„	55	„	13—40 „
M. Chereau	200	„	133	„	17—37 „
S. Lee	135	„	82	„	20—40 „

According to other tables of these authors 29·5 per cent. were single women, 9·3 per cent. widows, and 61·1 per cent. were married women, thus bearing out the remark of Kiwisch, that the disease is more frequent during the vigour of sexual life. Respecting menstruation, Drs. Scanzoni and West appear to differ on this point. Dr. West states that out of the 68 cases the ordinary uterine health was quite good in 54; while Dr. Scanzoni remarks of 57 cases, there were only 20 in which menstruation was always healthy.

Dr. Clay of Manchester observes, "During the last ten years I have myself examined 850 cases of ovarian diseases. Of this number two-thirds were of the right ovary and one-third of the left; one-third of the whole was connected more or less with some uterine disease, and two-thirds were pure ovarian diseases of one or both ovaries. The cases where both ovaries were implicated were not more than one in twenty, and those almost wholy connected with uterine disease." He dissents from the opinion of S. Lee, that the married are more liable to this disease than the single. He is disposed to think, generally speaking, their numbers will be about equal. As regards age he is of opinion that the two extremes of menstruation are most productive of ovarian disease, and again differs from S. Lee's opinion that labour is the most frequent cause, as he has found that these affections arise more frequently from suppression and cessation of the menses. See Scanzoni, *op. cit.* M. Chéreau, *Memoires pour servir a l'etude des Maladies des Ovaries:* Paris, 1844. Dr. West, *Lectures on the Diseases of Women:* London, vol. ii, 1858. Mr. S. Lee, *On Tumours of the Uterus, &c.:* London, 1847. Dr. Clay, *Obstetric Surgery:* London, 1856. J. C.

§ X.

CLASSIFICATION.

The classification of the diseases which are the subject of our lectures will be founded exclusively on the anatomical structure of the organs, according to which the principal organic changes therein met with can be most successfully investigated. Affections unattended with alterations of structure, and accompanied merely by abnormal sensibility (neuralgia) or functional disturbance, though they certainly do occur, are almost unknown to us, on account of the deep situation of the affected organ. Thus, in several authors we find mention made of *Oophoralgia*, and we believe we have observed something answering to the description; but we have never been able to understand clearly the reason for the acceptance of such a form of disease, and therefore we have taken care to avoid any error which might possibly arise from such an assumption. In order to satisfy practical requirements in this classification as far as possible, the most prominent external signs must be made available to their full extent, or at least considered in so far as they are indispensably necessary in forming a diagnosis at the bedside. From these considerations in particular we are obliged to separate chronic enlargements of the ovaries into two great groups, i.e., into fluctuating and solid tumours, although this

classification cannot be satisfactory in an anatomical point of view.

In order that the classification may correspond as much as possible to both these points, we propose the following arrangement of ovarian diseases.

1. *Imperfect development.* 2. *Dislocations.* 3. *Inflammations.* 4. *Simple and* (5) *Compound follicular degenerations and formation of secondary cysts.* 6. *Solid tumours of the ovaries.*

§ XI.

ABSENCE AND IMPERFECT DEVELOPMENT OF THE OVARIES.

The absence of both ovaries is one of the rarest phænomena, and is only met with in common with more or less considerable deformities of the other sexual organs, and not unfrequently with imperfect development of other parts of the body. Most cases of this kind have been observed in the bodies of new-born children, the majority of which were not viable in consequence of complicated deformities. The few instances we have on record of complete absence of both ovaries with a long duration of life, leave much to be desired in the greater number of them, both as regards the anatomical facts and in details respecting the symptoms during life;

so that the pathology of this condition still remains incomplete. In the first Mémoire upon diseases of the ovaries by *A. Chereau* (Paris, 1844; p. 111) we find several cases of this deformity collected — of which we will give the following—

Morgagni found complete absence of both ovaries in an old woman, aged 66 years, of less than middle stature, who had married a powerful man, but had never had children. Her nymphæ were small, the clitoris represented by a small round eminence only, the vaginal orifice very narrow, the uterus small, but the tubes were of the normal size.

Charles Pears contributes the following case: a woman died in her twenty-ninth year; she was very small, her growth was arrested in her tenth year, menstruation had never occurred, the breasts were not developed more than in the male. In the autopsy no trace of the ovaries was discovered, the tubes were penetrable to their fimbriated extremities, the uterus of normal form but small.

In one case communicated by *Lieutaud*, the uterus and its appendages were completely absent, and the vagina terminated superiorly in a blind sac.

Lastly, *Frederick Cripps* gives an instance in the case of a girl, eighteen years of age, who died from perforation of the stomach. Her breasts were very slightly developed, all signs of approaching puberty, and in particular all symptoms of menstruation, were wanting. The autopsy disclosed complete absence of both ovaries and both fallopian tubes: a very small uterus was present.

It will be seen from these observations how commonly various deformities of the other genital organs are combined with this anomaly, and they also show that the whole bodily development, the feminine *habitus*, and particularly the sexual functions, present corresponding anomalies.

However marked these symptoms may be the diagnosis of this anomaly is not easily made out with decided certainty during life, because, as we will shortly mention, similar symptoms may be produced by retarded development of the ovaries. In a therapeutical point of view these cases are important only in so far as they are calculated, where the existence of this abnormity is conjectured, to prevent us employing any mode of treatment with the design of calling the sexual function into activity.

§ XII.

The absence of one ovary, compared with the cases in which both organs are wanting, is not only a less rare occurrence, but it may also exist with a more or less normal formation of the sexual organs. We have met with these deformities three times in post mortem examinations: in two cases the right ovary was absent; in the third, the left. The first case was that of a woman 48 years of age: a simple cyst, with thick walls and about the size of a fist, was at the same time found on the left side, with hypertrophy of the

uterus. The second case was in a woman 63 years old; the third in an individual 64 years of age, in both of whom the single ovary present was healthy. In all three cases the configuration of the uterus and other sexual organs was normal, but in all the Fallopian tube, corresponding to the absent ovary, was rudimentary; in the first case it was only one inch and a quarter, in the second four lines, in the third six lines long, and was permeable only in part from the uterine side; it was obliterated in its free end and terminated in an obtuse point. The women in whom these abnormities were discovered had all borne children of different sexes.

From what we have seen in other preparations, and learned from the contributions of others, it appears that the absence of one ovary is not unfrequently combined with a rudimentary development of the uterus; and that the ovary corresponding to the half of the uterus which is more or less defectively formed is usually absent, but this must always be considered only as an accidental complication, because complete absence of the uterus is met with combined with perfectly-developed ovaries.

Pathologically considered the absence of the ovary, as is evident from the foregoing observations, is of no apparent significance; and since this abnormity cannot be demonstrated during life it is, therefore, without further interest in relation to our present subject.*

* Dr. Scanzoni states that sometimes when the ovary is absent, the kidney of that side of the body in which the ovary is wanting is found deeply situated in the pelvic cavity.—J. C.—*Lehrb. d. Krank der Weib Sexual. organ*; p. 340.

§ XIII.

The *fœtal development* of the ovaries, that is, a permanent low stage of development, is of greater importance, as regards the female sexual life, than the absence of one ovary. We have seen this condition, in the dead house, in persons of almost all ages. In the most marked cases the ovary always presented the tongue-shaped lobular form, and the size of a fœtal ovarium, without any indication of the development of *Graafian follicles*. But between the pure fœtal form and perfect development of the ovaries there are many intermediate conditions, which are caused by *arrested development*, and in which the smallness rather than the fœtal form is more marked. In general the fœtal condition of the ovaries is combined with arrested development of the uterus, and in some cases of the whole sexual apparatus; still this is not always the case, nor even comparatively so, for in one case the uterus presents the pure fœtal form, while in others its development is much farther advanced. In by far the majority of cases a weakly formation of the whole body and often a chlorotic condition are also combined with the undeveloped state of the ovaries, and the subjects of it are liable to constitutional diseases even in youth, and often at the time of puberty. We have observed most cases in the bodies of girls between thirteen and twenty years of age; however, we have met with some

cases in old persons, and one in a woman of fifty years.

The state of the internal genital organs during life has, for obvious reasons, never been ascertained with certainty as yet, and it can only be conjectured in a general manner when the undeveloped condition of the external genitals, the absence of menstruation, and a weakly formation of the body furnish data for such a conclusion. In arrested development of the ovaries, in which some follicles attain maturity, menstruation will take place, although in less quantity than in the normal state; hence the most important symptom for diagnosis is wanting.

Whether this anomaly can be replaced by the natural condition in the further course of life, we have no experience to enable us to decide; however, we must observe that it would be an obvious mistake to endeavour to produce the menstrual secretion by therapeutical agents, and especially by stimulating remedies. These attempts it appears, from several cases collected by us, were generally followed by bad consequences; for they seem to cause different distressing symptoms of congestion; and when a disposition to tuberculosis is present—which is frequently the case—they lead to a more rapid development of this malady.

II. DISLOCATIONS OF THE OVARIES. HERNIÆ.

§ XIV.

The ovary changes its position either in consequence of a pathological enlargement, which compels it, in consequence of the unyielding state of the pelvic wall, to locate itself either in the posterior or deeper part of the pelvis, or, when the enlargement is very great, in the superior pelvis; or it may be dislocated by the adjacent organs, particularly by the uterus, which is so intimately connected with it, or by the rectum behind it, or by pathological formations displacing and occupying its position. It is also often gradually removed from its site by the contraction of peritoneal adhesions, so that we have found the ovaries drawn close to the uterus, and even united to its posterior surface, by such connections. Again; the descent of the ovary, which in the puerperal condition is situated in the upper pelvic space, may be prevented by the same adhesions, and it will thus be retained in an abnormal position. All these dislocations have been specially considered by us in different places, and therefore

require no further description here. Besides these frequently-occurring dislocations, another rare change of position takes place; that is, a more or less complete hernia of one or both ovaries through the inguinal canals, which we must examine more minutely.

§ XV.

The so-called *herniæ of the ovaries* have hitherto been looked upon only as pathological curiosities, and we have never succeeded in diagnosing them during life, unless when they were unexpectedly discovered in the performance of herniotomy, which has several times happened.* The etiology of this peculiar affection has as yet been anything but satisfactorily explained. The ovaries have been found in different hernial canals, though it is known they are so far distant from all of them that their approximation to the latter cannot easily be conceived, and so much the less inasmuch as the ovaries rest on an immoveable basis upon the lateral wall of the pelvis. In

* Dr. Henry Oldham, through Dr. Farr, communicated to the Royal Society two very interesting cases, in which the two ovaria had descended through the inguinal canals, and became permanently lodged in the upper part of the external labia; and in each of the cases the most careful and repeated physical examination failed to detect either uterus or vagina. One case was remarkable in presenting the physiological peculiarity of a spontaneous periodical increase of one or other of the ovaries, first at intervals of five months, more recently of three or four weeks, apparently supplying direct evidence of an ovarian menstrual act. Notwithstanding this abnormal development the patient married. This case was also of interest in relation to abscess of the labia, which, at the times of the ovarian increase, it resembled in its general aspect, being then about the size of a goose egg, the cellular tissue, skin, and mucous membrane being œdematous and inflamed. The mammæ and external genitals were well formed.—J. C.—*Med. Times and Gazette*; Nov. 7, 1857.

cases where great intestinal herniæ existed and the ovaries were enclosed in the same hernial sac, their appearance might be explained by supposing that they had been torn away with the dislocated bowels. After delivery, also, in which the ovaries undergo a considerable physiological displacement, their approximation to some of the hernial outlets is readily conceivable; but there have been cases in which the ovaries were found single and alone in the hernial sac, without these predisposing conditions. Under such circumstances the process of dislocation was difficult to understand, and several pathologists assume that such herniæ must always be congenital. This view is defended by *Deneux* in particular, who first collected in a memoir all the cases known up to his time, and increased them by his own observations.—(*Deneux Mélanges;* t. viii, p. 7). We, also, agree in this opinion, and believe that the anomaly originates during fœtal life, and is increased in the course of years.

Since the ovaries, as we have already stated, have been found in different hernial canals, they have been divided into several species, among which are *inguinal*, *femoral*, *abdominal*, *umbilical*, *vaginal*, and *thyroid* herniæ. To these different forms we can add one from our own experience, in which the right ovary and the tube had broken through the dilated vascular space of the right foramen ovale, and had drawn the uterus near to the hernial outlet. Respecting these several forms of herniæ, it is, however, to be observed that inguinal and

femoral herniæ only present any great interest, because it is in these forms only that the ovary is met with alone as a primitively dislocated organ. As to the umbilical herniæ, it is evident they can only take place when the ovaries are considerably elevated above their natural position, which can occur only under certain pathological conditions; and since the only observation respecting this anomaly which we owe to *Camper*, and which appears to us to be questionable in many respects, is said to have been made in the case of a degenerated ovary, it follows that we can lay no weight upon this as a case of umbilical hernia. As regards abdominal herniæ, it is to be observed that they have been met with exclusively in surgical operations on the abdomen, particularly in Cæsarian sections, and in these cases were of very secondary importance. This is the case also in cases of thyroid hernia, in which the ovary has burst through the obturator foramen simultaneously with the intestines. Lastly, those conditions have been falsely described as vaginal herniæ, in which the ovaries had descended more or less deeply into the inferior pelvic space, and formed a protrusion in the vagina; a condition which we have repeatedly mentioned, and which is not unfrequently met with, but has not the importance of a hernia, for reasons easily understood. The hernia of the foramen ovale observed by us would have been of more importance than the last-mentioned forms, if it had not been an isolated case, on which we cannot make any further commentary.

§ XVI.

SYMPTOMS AND DIAGNOSIS OF HERNIÆ.

Of the two forms of ovarian herniæ which appear to us most important, the inguinal herniæ have been met with much more frequently than the crural, and upon the former there are some more minute, though still very unsatisfactory, pathologico-therapeutical observations. The hernial tumour found was of a size varying from that of a walnut to that of a hen's egg and above; it was always irreducible, more or less uneven and solid, moveable, not compressible, and generally did not present the known symptoms of an intestinal hernia. The patients generally felt pain on pressure being made upon it, and also a dragging and pulling sensation in the course of the ovarian ligament, which was said to be increased by any unfavourable change of position. Although in some cases the disease remained for a long time without causing much distress, yet it often turned out to be very serious afterwards; very severe and dangerous attacks also set in, in consequence of strangulation which chiefly presented the symptoms of intense peritoneal irritation. In some cases suppuration is said to have supervened; and in one case, by *Lassus*, in a girl between four and five years old, an abscess is asserted to have formed in the vicinity of the ovary; and in a case by *Balling* suppuration is said to have taken place in the

ovary itself. We cannot, however, help remarking that much more accuracy is to be desired in these observations.

As to the data for diagnosis, they are mostly negative; that is, a hernia is discovered without the common symptoms of strangulated bowel or omentum; the relation of the uterus to the permanent tumour is the chief positive sign of this anomaly. For this purpose we advise the application of the uterine sound recommended by us, with which it is always possible to communicate greater motions to the uterus than in any other way, and these movements may very likely be communicated to the dislocated ovary. The periodical swelling of the strangulated ovary during the catamenia is given by some pathologists as another positive sign, but in consequence of its inconsiderable degree it is not readily perceived.*

§ XVII.

THERAPEUTICS.

It is obvious that the problem to be solved as regards these herniæ, is the possibility of their reposition. Whether this is practicable has never been made out with certainty, because, when it was believed to have been successful, the diagnosis, as we have before stated, was

* On Hernia of the Ovaries; see an excellent article in the *Bibliothèque de Medecin-praticien*, tome premier, p. 643. J. C.

not confirmed. Hitherto, we have only had to deal with cases in which no attempts at replacement were made during life, and this peculiar condition of the ovary was studied minutely in the dead body only, or in which the ovarian herniæ appeared to be irreducible and herniotomy was obliged to be performed in consequence of the urgent symptoms, and thus cleared up the diagnosis. Several such operations were published, a few of which we will briefly describe.

One of the best known cases is contributed by *Pott*. It was that of a girl twenty-three years of age, of good constitution, who had entered Bartholomew's Hospital in consequence of two tumours situated in the inguinal region, and which had for several months caused her so much pain that she was prevented by them from attending to her usual employment. This girl was strongly made, healthy, and menstruated regularly; she complained of nothing except of pain on pressure being made on the tumours and in walking. These tumours were soft, uneven, easily moveable, not inflamed, and lay external to the tendinous apertures of the inferior abdominal wall. Bleeding, derivative remedies, and attempts at reposition were made without success, and operation was therefore resolved on.

After division of the skin a thin membranous sac was discovered, in which a body was enclosed that could be looked upon as nothing else but the ovary; a ligature was applied close in front of the inguinal ring, and the body cut away. This operation was also performed on the other

side in a similar manner. After the operation the girl enjoyed good heath, but her breasts fell away, menstruation was suppressed, and in place of the corporeal fulness which decreased, the muscular system was developed in excess, similar to the masculine habitus.—(*Percival Pott, Œuvres Chirugic;* t. i, p. 492.)

One of the most lengthy contributions is that by *Deneux*, which, however, we will only follow in outline. Madam R., forty-two years of age, of powerful constitution, had borne six children and aborted three times, after which, she was much reduced, in consequence of great loss of blood. In the year 1807 she again became pregnant: in the fifth month of this pregnancy she fell upon her knee and abdomen, after which she felt a severe pain in the lumbar and abdominal regions for a long time, which was caused chiefly by the movements of the child; in particular a dragging sensation came on, which proceeding from the left inguinal region extended to the opposite side, it was increased in the dorsal position, but greatly diminished by lying on the left side. These symptoms soon afterwards abated considerably, but about the end of pregnancy they became almost unbearable. On the 23rd of January, 1808, a natural birth took place, followed by considerable hæmorrhage, which had to be suppressed by art. The two following days passed favourably, but on the third the dragging pains returned with increased severity. Now for the first time the patient observed a tumour, over which the skin was unchanged, situated in the left inguinal region

in front of the inner side of the femoral canal; it was very painful to the touch, solid in the anterior and middle region, round and somewhat softer at the base, without uniformity, and of the size of a large nut. Attempts at reposition were tried without success. The patient was free from fever, the inferior abdominal region somewhat painful, no constipation, and the lochia discharging copiously. An epiplocele was diagnosed, and as the dragging pains increased to an unbearable degree, and the remedies applied were without effect and constipation had set in, the operation was resorted to on the seventh day.

After dividing the skin and opening the hernial sac a tumour was found which presented the appearance of a tense serous membrane, and which after being cut through appeared of remarkable thickness and solidity. On more minute examination this second sac presented the form of a hydatid resting upon the ovary, which had burst through the femoral ring. Dilation of the femoral ring was now resolved on, a finger was introduced through it, with which the ovarian ligament was followed as far as the uterus, and it was ascertained that neither the bowel nor the omentum participated in the hernia. A great part of the cyst and almost all the ovary was cut away and the wound closed.

During the first few days after the operation the symptoms which were previously present in the abdominal region were anything but moderated: feverish symptoms also set in, and the wound assumed the worst appearance. Not-

withstanding this, a gradual amelioration took place ten days after the operation, and on the twenty-ninth day perfect cicatrization of the wound took place, and a perfect recovery resulted.—(I. c., p. 43.)

In conclusion, we will make mention of an operation recently performed with success upon a strangulated ovary, by *Dr. Neboux*, in Rio Janeiro. It was in an old woman, fifty years of age, who, in the year 1841, after suffering several years with a hernia, was suddenly attacked with all the symptoms of strangulation. The tumour was as large as a fist, situated upon the right Fallopian ligament, there was no change in the colour of the skin, and no tenderness on pressure. After reposition had been attempted without success, and the symptoms of strangulation had existed for six days, the operation was resorted to. In the bottom of the sac, which was carefully opened, the right ovary was discovered. It was the size of a pigeon's egg, of a violet colour, and strangulated in the internal inguinal ring. In order to make reposition possible, it was obliged to be cut in two places, and a slight adhesion between the ovary and the hernial sac separated. Recovery took place without further attacks within forty days.—(*Arch. Gén. de Méd.;* September, 1846. *Froriep's Notiz;* b. xi, 1846, p. 187.)

From these contributions it will be seen that, in strangulated ovarian herniæ, the *Taxis* after dilatation of the hernial canal, as well as extirpation of the dislocated irreducible ovary, has been performed successfully. For the last

operation, *Maisonneuve*,* the most recent author on this subject, mentions four operative methods; these are, ligature, ligature with excision, simple excision, and torsion; the first and last of which, however, he does not consider advisable.

III. INFLAMMATIONS OF THE OVARIES.

§ XVIII.

We shall next proceed to consider inflammation of the otherwise healthy ovaries, excluding the various lesions consequent thereon which we meet with in their degenerated condition. This will embrace the pathology of several chronic ovarian affections, which will be noticed hereafter. As it is in general difficult to define the limits of many of these disorders, it will be necessary to perfect the description of one form by reference to others. This will enable us to abridge some sections in the mode that appears to us most available for practical purposes.

Inflammation of the ovaries must first be divided into the puerperal and the non-puerperal; each will, therefore, constitute the subject of a special investigation.

* *Les Opérations applicables aux Maladies de l'Ovaries.* Thèse soutenue en Janviér, 1850. Paris.

§ XIX.

a. INFLAMMATION OF THE OVARIES APART FROM THE PUERPERAL CONDITION.

PATHOLOGICAL ANATOMY.

We sometimes find inflammatory appearances most marked on the peritoneal surface, at others in the follicles, or in the stroma of the ovary. *Peritoneal oophoritis* is most frequently met with in the form of exudations, which invest the ovaries with false membranes of various degrees of thickness and texture, and connect them to the neighbouring structures. In post mortem examinations they are repeatedly met with in the form of cellular membranes and bands, which are occasionally so extensive that the ovaries, the tubes, and the broad ligaments are converted into an inextricable mass, from which the ovaries can scarcely be separated. After some time these exudations frequently become considerably thickened and contracted, by which process the ovaries are entirely enclosed in a sac, and may afterwards become atrophied.

The origin of these circumscribed attacks of peritonitis is either the inflammation of a follicle, or of a portion of the stroma of the ovary; the occurrence of peritonitis is, consequently, consecutive; it often, however, preponderates over the primitive affection, and its symptoms

are most serious. But in some cases it appears as if peritonitis could be induced independently, and it often extends to the ovary during attacks of metritis and inflammation of the Fallopian tubes.

Primary peritoneal oophoritis is most frequently limited to one side, while that arising from metritis commonly attacks both. In some instances this peritoneal affection gives rise to so much exudation that that side of the pelvis which is affected, or even the whole pelvic cavity, may be filled with it, and after its condensation a tumour as large as a fist may sometimes be detected.

The usual sequence of these pathological conditions, which are commonly found on both sides, is an impediment to the menstrual process—that is to the rupture of the mature follicles. The ovary, under such circumstances, is frequently found quite full of swollen *Graafian* vesicles, most of them containing blood, and the parenchyma, also, is often in a hyperæmic condition. But the reverse happens in those cases where the ovary is compressed and atrophied by the contraction of an old exudation, which, however, is a very rare occurrence.

The inflammation of the follicles is commonly confined to one *Graafian* vesicle, seldom extended to two or to a whole group. An indication of the inflammatory process is met with, as was before stated, in the menstrual metamorphosis of the follicles. This slight degree of inflammation not unfrequently degenerates, and from this cause the object of the menstrual activity

is often frustrated, and the inflammation is found in a still unruptured follicle. The products of this inflammatory condition are more or less plastic, and in general very much infiltrated with blood; the follicle is distended to the size of a pea or a cherry, and its external coat is intensely reddened by capillary injection. When several follicles are implicated, the surrounding stroma also participates in the inflammatory condition, and is found in a state of hyperæmia, serous infiltration, or inflammatory softening.*

* It has been previously stated that during menstruation the follicle becomes filled with blood, but that this does not usually run into a morbid condition. On this point Dr. F. A. Aran remarks (*Leçons Cliniques sur les Maladies de l'Utérus et des ses annexes*, part ii; Paris, 1858), page 571—"For my part I have very grave doubts relative to the physiological character of the greater part of those phænomena which have been described as spontaneous ovulation; those effusions of blood of the size of a small nut, those yellow bodies which are represented as a phase of the separation of the follicle, appear to me as true pathological facts; and I hope shortly to show that in women in whom menstruation is perfectly normal, we discover in the ovary scarcely any other trace of that physiological process than a follicular rent, and even this is not always present." Dr. Farr (*Op. Cit.*, p. 575), however, asserts that there is enough of similarity between the healthy and morbid ovisacs to prove their identity of origin, and enough of dissimilarity to show their divergence from a common starting point." He relies upon the following characters for pathological discrimination, which have been condensed and arranged in opposite columns, from his remarks, for readier comparison:

NATURAL FOLLICLE.	MORBID FOLLICLE.
1. Always near the surface when preparing for dehiscence, and often projects considerably above the level of the ovary.	1. Often not peripheral, but more or less central in its position in the ovary. It may attain to the size of one-third or half of the ovary without necessarily causing any distinct prominence above the surface, especially when occurring singly.
2. Coats unequally thick; thinnest at the most prominent part of the follicle.	2. Walls are equally thick, and exhibit at no part any evidence of attenuation or absorption.

Even in cases in which the inflammatory process has attained a high degree of intensity, the enlargement of the ovary is not always considerable; indeed, an inflamed ovary seldom exceeds twice its normal size, and the part immediately affected seldom embraces half the ovary.

Although this inflammation in its common form appears of little moment, it often lays the foundation of very serious subsequent disorganisations, namely, many simple and compound cyst-degenerations, particularly primitive pus-cysts which must be looked upon as belonging to this form of disease, although they will be considered separately on account of their external symptoms. In favourable cases the follicular inflammations lead to atrophy of the inflamed *Graafian* vesicles, followed by absorption of the

NATURAL FOLLICLE.	MORBID FOLLICLE.
3. Considerable vascularity about the elevated part plainly visible externally.	3. No preparation for rupture is indicated externally by any peculiar arrangement of vessels, or by any marked increase of vascularity.
4. Walls of follicle at this stage of a bright yellow colour.	4. The walls do not exhibit the remarkable yellow colour, nor the cerebral foldings characteristic of the advancing normal ovisac, the tissues being composed of the undeveloped *Graafian* follicle.
5. The liquor folliculi is either clear and limpid, or intermixed with blood, or the centre of the sac is filled by a coagulum which is at first bright red, and afterwards becomes pale and at length nearly white. The coagulum may adhere to the walls and undergo fibrillation and subsequent conversion into a solid body, or into a dense white membrane, or it may be rapidly absorbed.	5. Contents of sac are neither the clear liquor folliculi, nor the bright clot, nor the developed fibrin, but generally a collection of dark coffee-ground matter, resulting from the admixture of a quantity of decomposing blood corpuscles, and fragments of membrana granulosa, intermixed with a dirty fluid.

J. C.

exuded matters, and the perfect restoration of the normal tissue of the organ.

Primitive inflammation of the stroma occurs very seldom in the non-puerperal state, especially if slight œdemas and hyperæmias are excluded, which are frequently developed in the pelvic organs during menstrual congestions and other determinations of blood. Still serious inflammations of the ovaries do exist which affect the whole of the organs, and occasion a very severe acute metamorphosis, sometimes terminating fatally in a short period, as happened in the cases of two young persons whom we saw, in the one by an acute abscess, in the other by a sanious disintegration (a kind of putrescence). In both cases the supervention of peritonitis was the cause of death. Inflammation of the stroma in its first stage is not marked by any great enlargement of the ovary, owing to the great resistance of the external coat, but the tissue of the organ is often very much softened and infiltrated with blood. When collections of pus form in the ovarian tissue as the result of inflammation (a termination we have seen in a single case only) a very rapid increase of size, and a series of changes usually set in, which are not often observed in puerperal oophoritis, and which will be thoroughly considered hereafter. When the inflammation takes a chronic course it is very probable that several changes take place partly with thickening of the tissue, and partly with areolar softening, which will be the subject of future consideration.

Secondary inflammation of the stroma which supervenes on follicular inflammation, on extensive peritonitis, or perforating pelvic abscesses, and in some cases on extra-uterine pregnancy, occurs oftener than the primary form, but it is an affection of no very great importance.

§ XX.

SYMPTOMS AND COURSE.

The sensibility of the ovaries is very slight, of this we have several times had an opportunity of convincing ourselves on opening the abdominal cavity during life. When the peritoneum does not become involved to any great extent in the inflammation, no marked symptoms of pain are observable in oophoritis; but as peritonitis is seldom absent in intense inflammation of the ovaries, pain also is generally present. Pain in the ovarian region is also the most prominent symptom, and where this is absent the diagnosis of this disease is impossible, because the other indications of inflammation are almost wholly wanting, and the tumefaction alluded to in the anatomical description is so inconsiderable in recent inflammations that it cannot be detected by exploration, and is not appreciable until a secondary process has taken place.

The other local symptoms depend for the most part on the extent of the affection, and on the simultaneous

participation of the adjacent structures. The range of the peritonitis may be very considerable, even if those cases are excepted where consecutive peritoneal inflammations have been caused by perforations, by collections of pus, or putrescent decomposition of the ovaries, manifesting in their course the usual symptoms of peritonitis after perforation. Similar affections of the uterus are not unfrequently connected with ovarian inflammations, and are generally attended with blenorrhœa, irritation of the bladder, with scalding pain in micturition, pain in defœcation, or a feeling of numbness, or acute neuralgia in the corresponding extremity, and several other indications of hyperæmia of the pelvic organs. All these symptoms are very changeable, and their presence is not pathognomonic of the disease in question. It must be observed in reference to menstruation that in many persons the local malady commences with considerable derangement of that function, when suppression of the catamenia most frequently happens; but in several cases we have observed intercurring menorrhagia, the result of great congestion. In chronic persistent oophoritis the hemorrhagic excretion of the uterus may be again regularly established, but during the intervals the local disorder is generally subject to transient exacerbations.

The constitutional disturbance also depends on the intensity of the disease and the sensibility of the individual. We have observed acute oophoritis ushered in by an intense attack of shivering, and accompanied for weeks by severe

continued fever. These symptoms chiefly occurred in those cases which led to great organic changes of the affected ovary, particularly to the formation of cysts and abscesses or ichorous decomposition. In a considerable number of instances a slight constitutional reaction takes place, or none at all, while its presence is accompanied by no remarkable peculiarities. Lastly, cases of hysteria and nymphomania, which several physicians have endeavoured to bring into especial relation with ovarian diseases, are evidently when they co-exist nothing more than accidental complications.

The duration of oophoritis apart from the puerperal condition is very variable, and cannot be determined in slight cases in which there are no marked general and local manifestations. In those instances in which it commences with unusually severe symptoms, and particularly in those where it leads to extensive degenerations of the ovary, or causes much peritoneal exudation, it may continue for weeks or months with more or less marked remissions, and may show itself by general as well as by local symptoms; in other cases perfect intermissions occur, and the paroxysms are not unfrequently coetaneous with the catamenial periods. In many females the constitutional effects disappear tolerably soon, and the disease is limited to the local phænomena. In very rare cases the affection proves fatal *per se* after the course of a few days; and this termination, as we have before stated, is caused by sanious decomposition of the ovary, or by acute perforation in consequence of an abscess being formed in it.

The other events have been partly given in our foregoing observations. In the most favourable case, which is almost always the most common, after a short duration the exudative process is suppressed, and the exudation, which is more or less considerable, is either removed by absorption, or, after a longer or shorter interval, undergoes the usual metamorphosis. It is then commonly found that the peritoneal exudation is transformed into a cellular or filamentous layer which cements the ovaries to the surrounding structures. In some instances, on the other hand, a fibrous condensation of the deposited matters takes place, and, as we have before observed, dense capsules are formed round the ovary, and cause atrophy of its tissue. The exudations into the follicles also lead to various metamorphoses of the exuded matters, with subsequent shrivelling and atrophy of the affected vesicle.

When the course is less favourable, a progressive process of disease commences with the inflammation, and abscesses and various chronic tumours of the ovaries are developed, which will be afterwards taken into consideration.

§ XXI.

DIAGNOSIS.

In general the peritoneal oophoritis is the only form of this disease amenable to diagnosis, and the seat of the pain furnishes the only indication. But since a more or less extensive inflammation of the serous covering is a part of most cases of parenchymatous oophoritis, this also is capable of being diagnosed. But the nature of the malady can only be incidentally surmised from the accompanying symptoms and from the course it takes. We must always be apprehensive of considerable disease when there is intense fever, continued pain, and great sympathy of the adjacent structures and the coördinate organs; and it must be particularly mentioned that acute softening (putrescence) and the formation of an abscess in the ovaries are usually marked by more or less intense rigors. Still a decisive separation of simple peritoneal oophoritis from that accompanied by parenchymatous disease of the ovary, however important it may be in a prognostic point of view, is not often possible; because, as we have already observed, the changes of the ovarian tissue are generally inconsiderable at the commencement of the disorder, and they only become of importance as it extends.

In order to determine minutely the seat of the pain and of the affection generally, it is always necessary to

use great care in the examination. It often happens that the ovaries are searched for far too high, and too much towards the side; and the fact is overlooked that they are generally situated in the lower pelvic space, more to the back, somewhat deep under the linea arcuata, and are covered by many convolutions of the small intestines. External exploration, therefore, especially when the abdominal parieties are thick and tense, gives very little reliable information respecting the seat of the malady; and it is only in those who have had children, and whose abdominal integuments are thin and flaccid, that it is possible by strong pressure on the abdomen in the direction indicated to reach the seat of the pain. When the peritonitis is extensive, moderate pressure may indeed excite pain in the lateral pelvic region, but here a more minute diagnosis is still more difficult, owing to the great extension of an aditional disease.

The result of the exploration through the vagina and rectum is certainly more important. By this mode the seat of pain can be discovered with great certainty, by strongly pushing up the floor of the vagina and moving the uterus. We can also often reach the affected ovary through the rectum, especially when two fingers are employed in the examination. In many instances, however, the ovaries are not accessible in this way, or the great sensibility of the individual prevents any definite result being obtained. In these cases we sometimes employ the uterine sound, and endeavour, by moving the

uterus, to detect the seat of the malady, which some patients have pointed out with great certainty.

It is always of the first importance to determine by internal examination that the uterus is not the seat of the abnormal manifestation, for uterine affections have on innumerable occasions been mistaken for ovarian diseases, particularly when the uterus has been situated laterally. But when no uterine suffering can be conjectured, no foreign structure detected in the pelvis, and no implication of the bowels can be ascertained, when there is marked pain in the ovarian region, and lastly, when the etiology favours the supposition of a disease of the ovary; we are not likely to make an error if we diagnose it as such, although in some cases many diseases of the broad ligaments (for instance, cyst formations), of the tubes (dropsy, tuberculosis), of the vermiform appendix (perityphlitis), of the peritoneum (peritoneal tuberculosis), of the psoas (psoitis, &c.) have occasioned errors, the knowledge of which is generally acquired only after a long observation of the patient.

§ XXII.

PROGNOSIS.

In all cases where there is continued general and local reaction, and where great intumescence of the ovary is detected, the prognosis is unfavourable, in so far as it may

produce an undesirable and often incurable metamorphosis of the affected organ. Peritoneal oophoritis is the most favourable, even although it leaves considerable exudations, because these are commonly removed in time, and it is only in rare instances that the health of the individual is seriously undermined by perpetually-recurring attacks. The disease in its acute course scarcely ever terminates fatally, and then only where a very extensive peritonitis is caused by ichorous or suppurative infiltration in the affected ovary.

The chronic degenerations oftener prove fatal in various ways, which will afterwards be considered. It sometimes happens on the contrary where the disease is not attended with severe local or general symptoms, and as long as we cannot find any large tumour with certainty, that a favourable course may be prognosticated, and injury to the sexual functions need be apprehended only in so far as recurring oophoritis on both sides may cause sterility.

Still there certainly are cases where intense parenchymatous oophoritis and considerable tumours distinctly demonstrated are removed in course of time, and all the symptoms disappear: but this event can never be predicted with certainty, and the nature of the disease is generally difficult to conjecture.

§ XXIII.

TREATMENT.

Every case of oophoritis in the non-puerperal condition of the female must be watched with great care, because it may easily become the origin of lingering diseases. In the acute course of the disease, the so-called antiphlogistic means are usually recommended, and general or local remedies are only employed in proportion to the severity of the attack. When there is suppression of the menses, bleeding in particular must not be neglected. The application of leeches, in suitable number, to the vaginal portion of the uterus is decidedly beneficial. When it is practicable, and where there are no contra-indications, we generally prefer this to taking blood from a more distant part; and it should only be taken from the inguinal or perineal region when it is inexpedient to abstract it otherwise. When there is any disposition to constipation, this should be removed by enemas of castor oil, and copious evacuations produced afterwards by drastic purgatives. In very severe cases calomel should be given in large doses, and it should be combined with jalap when there is great intumescence of the ovary. After the subsidence of the fever, the constant application of cataplasms to the abdomen, and the employment of baths should be recommended; in chronic oophoritis the use of external

epispastics, frictions with grey ointment, and the internal use of mercury usually constitute the other therapeutical means; while perfect rest both of body and mind, a uniform temperature, a suitable diet, and, in particular, abstinence from coition, are important curative conditions not to be neglected.

In the chronic stage of the disease, the regulated use of saline mineral waters, the use of whey, salt water baths, and, in intumescence of the ovary, the employment of remedies containing iodine, and of sea-bathing have proved beneficial. When subsequent diseases are developed, their treatment (which will be a subject for after consideration) must be modified according to the nature of the malady.

§ XXIV.

b. INFLAMMATIONS OF THE OVARIES IN THE PUERPERAL CONDITION.

It is but seldom that inflammation of the ovaries manifests itself as an isolated disease in the puerperal state. It is most frequently met with in the course of puerperal fever; but in most cases it plays a secondary part, as a local symptom, similar to the generality of primary affections in the generative organs, and represents only a local expression of the general disorder, which is usually a much more important and dangerous one.

§ XXV.

PATHOLOGICAL ANATOMY.

Puerperal oophoritis, like the inflammation just described, also presents itself in three forms: the peritoneal, the follicular, and the parenchymatous. Each of these affections are expressed by well-defined characters separately, as well as combined.

Peritoneal oophoritis is, generally, only an extension of peritonitis originating in the uterus and its appendages, and in this form is of no special pathological importance. Still it sometimes occurs that this peritonitis, when it extends to the ovary, is confined principally to that organ and its surrounding parts, and even causes an abundant exudation, so that the ovary becomes closely enveloped, and intimately united to the adjacent structures. For some time after delivery the ovaries are situated in the superior pelvic space, and these adhesions may take place in this region, whence not only permanent dislocation of the ovaries, but also displacement of the uterus in the corresponding direction may be the result. Sterility may be caused when such inflammations affect both sides, and so much the more certainly when the tubes are involved in the adhesive process. Another effect of this circumscribed peritonitis, which in some cases locates itself in the region of the ovary, is the deposition of the exuded

matters between the adhering structures, which often leads to puriform infiltration and to the formation of small or large abscesses, in which the ovaries are so much implicated that the superjacent pus may cause absorption of their tissue, and in this manner they may even be partially destroyed. This pathological process, which presents many peculiarities, we shall afterwards take into consideration.

The *follicular affection* in the puerperal state presents itself either as apoplexy of the *Graafian* vesicles, or as a serous or puriform exudation. It may attack either one or several follicles in one or both ovaries. This malady especially attends puerperal fever, and therefore it is observed very rarely in puerperal women not affected with that disease. It is never very extensive, at least on both sides. This disease is commonly observed in consecutive cases during some periods of extensive epidemics. It is associated with all forms of puerperal fever; but the last-named exudations of pus are chiefly met with in puerperal affections of the lymphatic vessels; seldom with those of the veins. The first not unfrequently may be traced to the hilus of the ovary.

In the bodies of those who have died of puerperal fever, we commonly find the exudation deposited in the follicle of less considerable extent, and varying from the size of a pea to that of a hazel nut. When the duration of the local malady is prolonged, and the other symptoms become exaggerated, the hæmorrhagic as well as the serous and suppurative exudation may be more copious in one or

even in several follicles, and a decided cyst-formation takes place. The follicular inflammations which originate independently of the puerperal condition, may have a similar result; and it is no rare occurrence in an ovary which has previously been in an abnormal state, for the disease to advance rapidly when the puerperal period comes on. Besides, it is to be observed of the follicular suppurative exudations that, in some cases, during the progress of puerperal fever, they may occur as the so-called metastases on the accession of which the other symptoms are suppressed, and the disease continues as a local one.

Finally, *inflammation of the entire stroma* is the most important puerperal affection of the ovary. It occurs in all degrees of intensity, and gives rise to various inflammatory symptoms. Most frequently, acute œdema is met with, in combination with which the parenchyma of the ovary is often found considerably softened and infiltrated with blood. This serous infiltration may take place in all the stages, even in that produced by solid exudations; and one or both ovaries are also found thoroughly saturated with pus or ichor, and in some cases in a state of advanced putrescence.

This type of oophoritis is very often developed in intense endometritis, and both diseases generally occur together in a similar form. This obtains particularly in suppurative and ichorous infiltrations; and in putrescence of the ovaries we have generally observed the latter especially connected with a similar process in the uterus.

In cases where these affections are met with on both sides, they are generally the expression of so serious a constitutional malady that they possess no especial individuality, and are arrested in their course by death. However, in their malignant forms, they form no indifferent additions to the course of the disease, particularly in the form of putrescence, in which rapidly fatal diffuse peritonitis is produced by softening of the affected ovaries.

In the post-mortem examinations, the ovary in this form of disease is very often found considerably enlarged. This development takes place with remarkable rapidity, especially in putrescence, in which, after the disease has continued for twenty hours, we find the ovary some six or twelve times its natural size, so that it can scarcely be conceived how an organ of so dense a structure can be increased so considerably and so much altered in its tissue in so short a time, seeing also that it appears changed to a thin bloody panada. Enlargement proceeds less rapidly in infiltration; but even with solid or suppurative exudations, it may exceed the size of a hen's egg in a few days. The infiltration, as we have already observed, generally pervades the whole ovary, and, as the disease progresses, its tissue is completely destroyed; so that in solid exudations we find the parenchyma of the ovary changed into a soft, brittle, fibrinous mass, and in suppurative exudations into a pus sac.

These last pathological processes, especially when they are confined to one side, or are caused by metastasis, may

also continue independently after the subsidence of the puerperal fever. The milder forms do occur primarily without any perceptible symptoms of that affection, although, comparatively speaking, always very rarely.

These last mentioned forms more immediately interest us here, and it is their course principally which we shall endeavour to consider in the following observations.

§ XXVI.

ETIOLOGY.

The various forms of oophoritis occur most frequently, as we have stated, in lying-in women, in the course of puerperal fever, generally in groups. For instance, we have often made from ten to twenty consecutive post-mortem examinations without meeting with any considerable inflammation of the ovaries; after which this disease was observed, in more or less considerable development, in from six to ten individuals consecutively. The type of the inflammation was generally similar; so that the affection was apparently the result of epidemic influences. The form of the ovarian inflammation generally depends on the blood crasis, and consequently is analogous to the other groups of symptoms. As we have previously observed, the ovarian disease generally corresponds to the uterine disorder which is present. Whether the ovarian

inflammation can continue independently after the disappearance of the other symptoms, or whether a primitive attack can occur in puerperal women, we have as yet found no etiological facts to determine; but in intense metritis of traumatic orgin, in which, at the commencement of the malady, the symptoms appeared to predominate on the one or the other side of the pelvis, the ovarian affection generally became more extensively developed. When degeneration of the ovaries has previously existed, the puerperal state is often an unfavourable complication, by which the metamorphosis going on in the organ is generally subjected to a new irritation. In the disorders following abortion, in which the local symptoms are chiefly limited to the organs of generation, we have also observed oophoritis in several cases which manifested itself as the preponderating local disease.

The cold and styptic injections, frequently blamed by several physicians as causes of oophoritis, have not been proved by us to be injurious in this respect; and just as little can we speak of a traumatic lesion of the normal ovary occasioned during a difficult labour by compression against the sides of the osseous pelvis, because these organs are still situated high up with the pregnant uterus in the superior pelvis. So far as we have observed, it is only when they are morbidly enlarged that they can cause any essential impediment to delivery; but when cystoid disease is present, the rupture of the affected ovary may take place during parturition.

§ XXVII.

SYMPTOMS AND COURSE.

In all cases where oophoritis occurs as the secondary local manifestation of a puerperal fever, intensely implicating the whole organism and other important structures it neither possesses any peculiar symptoms, nor is it of any essential importance. It is only when putrescence and acute abscess supervenes that it directly causes imminent danger, either by aggravating the peritonitis already existing, or by giving rise to it by decomposition, in the first case, by perforation and the discharge of the contents into the peritoneal cavity in the second, by which the symptoms become more complex, and the fatal result of the disease accelerated. When severe pain suddenly comes on in the ovarian region, with rapidly-increasing signs of peritonitis, in the septic form of endometritis, or in distinctly recognisable putrescence of the uterus, or in pyæmia, it may be concluded with the greatest probability that the change in the ovaries just alluded to has commenced: and so in severe epidemics, when oophoritis is detected in one case, its appearance may be surmised in the next similar one.

The symptoms are more prominent and of greater importance in those cases where the ovarian malady preponderates over the other local manifestations, or where

it continues independently after the subsidence of the puerperal fever, or when it occurs as a primitive affection.

In these cases we generally observe that the oophoritis is limited to one side: and here two forms in particular can be discriminated: those in which the ovary is singly and alone the seat of the disease, and others in which all the uterine appendages of the one side sympathize more or less, and peritonitis is the predominant affection, or in which the latter supervenes on inflammation of the stroma. More minute diagnosis cannot well be made during life, because the group of symptoms is generally very inconsiderable.

In the first-mentioned case, in which the tissue of the ovary is the principal seat of the disease, it depends upon the degree of enlargement, upon the nature of the exudation, and upon the extent of the participation of the peritoneum, what symptoms will be manifested. In those instances where parenchymatous inflammation occurs, with rapid tumefaction of the ovary, it is very seldom that the peritoneum remains entirely free, and then signs of circumscribed peritonitis present themselves in the corresponding region, although we have found the ovaries considerably augmented in size, with solid exudations, and also acute abscesses the size of a child's head, in puerperal women without any peritonitis worthy of notice. When the local symptoms in these cases are less appreciable the diagnosis cannot be made out, unless a sharply circumscribed tumour can be detected in the ovarian region.

After the uterus has made some progress in its involution, the detection of even a moderately large tumour is not difficult, owing to the relaxation of the abdominal walls which commonly exists in puerperal women who do not suffer from meteorism. When such tumour is discovered it is found close to the uterus and a little behind it, is somewhat moveable, and a dull pain is excited on pressure. Examination per vaginam only enables us to arrive at a conclusion when the enlargement of the ovary commences at a late period of the puerperal state—that is, when it has descended into the small pelvis; under which circumstances examination per rectum also is the more useful, because the ovary is more easily accessible.

In these inflammations the general symptoms correspond to the intensity of the disease. Suppuration in particular is generally preceded by severe febrile symptoms, rigors, profuse perspirations, and copious deposits in the urine. The other signs are very changeable: thus, in some cases, there may be sharp pains or alterations in the sensibility and motion of the corresponding lower extremities, and also pains in the sacrum, as well as during defœcation; and when perforation of the abscess at length supervenes, a corresponding group of symptoms, which will be considered in the next section, are combined with the former.

The oophoritis attended chiefly with serous or with solid exudations into the stroma or into the follicles, and also the apoplexies, either remain stationary for some time

after the disappearance of the febrile symptoms, or become more or less removed by absorption, or at length lay the foundation of a progressive chronic metamorphosis.

The duration of the acute attacks is not generally limited to a definite period, so that no positive prognosis can be given respecting the termination of the disease.

§ XXVIII.

The second form we have distinguished, namely, that in which peritonitis is the predominant symptom, and in which all the appendages of the uterus are implicated, is less important as regards the coexisting ovarian malady. This is confined to an inflammation of the serous membrane only; but the local condition and the symptoms which accompany this affection are of more value, because it is difficult to distinguish them at the bedside from those of puerperal oophoritis. It not unfrequently happens that in the course of the milder puerperal fevers, or even in sporadic metritis or peritonitis, a circumscribed inflammatory affection locates itself in one side of the pelvis in the region of one of the broad ligaments. This inflammatory action proceeds to greater intensity, and often results in the formation of a very large solid tumour, which is immoveable and presents no defined boundaries. As we have before indicated, anatomically this affection forms

all the uterine appendages of one side into a mass which is filled and invested by the exuded products, and more or less cemented to the adjoining structures. The exudation sometimes consists mostly of serum, or it is partly solid. Sometimes it even contains pus, in which case several small or large pus foci are inclosed in each fold, or even in the tissue of the ovary also. By degrees these isolated collections of pus coalesce and then form large abscesses, which sooner or later are absorbed, or end in perforation.

During life these acute abscesses are invariably characterized by the symptoms of a circumscribed, but generally intense, peritonitis, which locates itself principally in either side of the body, and gradually terminates in the formation of a very solid, immoveable, indistinctly defined tumour in the superior pelvis. The size of the tumour is often very considerable. The thicker the superjacent integuments are, so much the greater will its size appear in the examination. Although very painful at their commencement, these tumours, with the exception of those cases in which perforation precedes the formation of an abscess, lose their great sensibility after the subsidence of the febrile symptoms. In the chronic form very disagreeable symptoms are not unfrequently aroused by compression of the pelvic structures. They are liable to repeated acute exacerbations, and cause great emaciation and bodily weakness.

The course of these pelvic tumours is various. In favourable cases, the tumour, and with it all uncomfortable

symptoms, completely disappear after a duration of some weeks or months. We have observed tumours the size of an adult head, exceedingly hard, and apparently in direct contact with the external abdominal integument, terminate in that manner. In other cases, suppuration extends and perforation takes place in various parts of the surrounding structures, finally terminating favourably. On the contrary, when the course is unfavourable, the continued or relapsing acute attacks, or the profuse suppuration, or the dissolution of these tumours, causes the exhaustion of the patient. A rare fatal termination happened to us in one case from strangulation of the adherent small intestine, two convolutions of which, strongly distended by gas, burst spontaneously during violent contraction.

§ XXIX.

TREATMENT.

When oophoritis occurs as a secondary symptom in puerperal fever, it does not call for special treatment: this must be directed exclusively to the other, more important disease. It is only when it sets in with great intensity, or when it appears independently, that therapeutical measures are required. The treatment of independent oophoritis occurring in the puerperal, does

not essentially differ from that which we recommended for the non-puerperal form, except in that the remedial measures must be energetically applied, in consequence of the acute progress peculiar to the malady. We prefer to make the local abstraction of blood from the vaginal portion of the uterus in this form of the disease also, while the use of mercury would appear to be urgently necessary, until slight symptoms of salivation are induced.

We have generally found the use of purgatives, clysters, cataplasms, and baths of great service; and the latter remedies in particular are necessary for a long time in the treatment of the pelvic tumours which we have mentioned. When the disease proceeds to suppuration and the abscess is accessible to the knife, its duration is considerably shortened by making an incision into it; but when ichorous decomposition existed, the exhaustion threatening the patient's life was not generally neglected.

In those cases in which the patient's health was in a great measure restored, and a slight degree of oophoritis remained after the puerperal state, the use of medicinal baths, saline mineral waters, and whey, proved beneficial in some instances. When other serious chronic metamorphoses occurred in the ovaries, a different treatment was resorted to, according to the nature of the malady.

IV. ABSCESSES OF THE OVARIES.

§ XXX.

The separate consideration of abscess of the ovaries is important in a practical point of view. Its nosological relations only have been chiefly considered in the other sections of this treatise: but from practical considerations a repetition of much that has been given will be necessary.

§ XXXI.

PATHOLOGICAL ANATOMY.

Abscesses of the ovaries differ as to their origin. In very rare cases they occur in young unmarried individuals apart from the puerperal and pregnant conditions, as the result of severe inflammation; and in that case, according to our observation, only as follicular affections. But even under these circumstances they may attain a very considerable size in course of time. Most frequently, however, they are the result of puerperal oophoritis, when they may be follicular as well as parenchy-

matous. They are very seldom observed during pregnancy, while it is a much more general occurrence for pus to be ultimately deposited in a follicle enlarged from other causes, or in a secondary cyst in consequence of an inflammation excited by external or internal conditions. The abscesses which, in the puerperal condition, are developed in the neighbourhood of the ovary—an affection which we have partly considered in the previous sections—must also be considered here.

Follicular abscesses, after a long continuance, may attain a very considerable size; indeed, according to our own observations, they have contained above sixteen pounds of pure pus. The cyst wall may resist perforation for some time, and in isolated cases for a long series of years. The parenchymatous abscesses are generally not so large, though we have seen them reach the size of a child's head; and we have also to observe that they commonly increase much quicker than those previously mentioned. These abscesses often proceed from several small foci, which coalesce in the course of time, and the greater part of the stroma of the ovary is destroyed, or a sinuous cavity is enclosed in its rudiments. After a protracted duration of the disease these collections of pus are surrounded by a membrane; but it is difficult to separate from the adherent parts, and it cannot be anatomically demonstrated to any extent. The disposition to perforation is a characteristic feature of these abscesses: in the acute form of the disease it may take place in the course of a few days

or weeks. The cystless abscesses in the neighbourhood of the ovaries are also disposed to perforation. Consecutive collections of pus in previously degenerated follicles seldom burst, with the exception of those cases in which the contents have an ichorous property.

As the space of time in which perforation takes place is different, so are the manner and mode equally various. In very acute cases a more or less extensive softening and rupture of the distended ovary takes place, even before the adjoining structures have become cemented together by the supervention of peritonitis, and a discharge suddenly takes place into the peritoneal cavity, followed by fatal inflammation of the peritoneum. In the more chronic instances, on the other hand, adhesive inflammatory attacks precede perforation and prevent the free escape of the pus or ichorous fluid, and terminate in a gradual corrosion and perforation of the cohering structures. These perforations very often take place in the large intestine, particularly the rectum; very seldom in the small intestine. In the acute course of the disease the perforated spot is short and simple; but in chronic affections the wall of the intestine is generally corroded externally to a great extent, and the denuded mucous membrane penetrated in several places. Besides the intestine, we find the anterior abdominal wall, and most frequently the corresponding inguinal, or the umbilical regions penetrated. Ovarian abscesses seldom perforate the bladder or uterus, or steer their course outwards through the vaginal floor or into

the perineal region. Complicated perforations are more frequently found in those abscesses referred to as occurring in the neighbourhood of the ovary, particularly when their contents are ichorous. In these cases destruction often spreads in all directions, and even the aponeuroses and bones are not spared. They also make their way externally into the lumbar region, and thus produce very extensive injuries.

The walls of the pus cysts of the ovaries, after the long continuance of the disease, are more or less compound; that is, they often consist of several layers which are formed partly from the exuded inflammatory products, and partly from the precipitates deposited by the contents. Frequently we find the internal surface lined with a reddish homogeneous layer, which on superficial inspection is similar to a layer of muscle, which it may sometimes be demonstrated to resemble in a microscopical examination.

Consecutive suppuration in old ovarian cysts takes place more frequently in compound cyst formations, and generally in the single and small cysts only. In the large cysts, on the other hand, we generally meet with fibrinous or watery contents only, the latter commonly as a consequence of tapping.

The more acute the progress of an ovarian abscess is, the slighter is the thickening of its walls, and the more benign its pus; but much more frequently it happens that after its contents have been evacuated externally complete contraction and obliteration of the pus cavity takes

place. This is observed particularly after parenchymatous inflammations, and in the intra-peritoneal suppurations surrounding the ovaries. Those abscesses, however, whose walls are highly organized, which are not evacuated for months or years, particularly when the point of rupture has no favourable direction, generally cause exhaustion in consequence of the frequent renewal of the decomposing pus, or become fatal by the supervention of pyæmia.*

§ XXXII.

SYMPTOMS AND COURSE.

However severe the symptoms, and particularly the general characters, may be in the majority of instances of the acute abscess under consideration, the relation of these to the formation of pus in the ovary is not easily recognized at the commencement of the disease. In the puerperal state this is especially the case, because the severe febrile symptoms may admit of

* Dr. Farre refers to the class of suppurative diseases that "singular morbid condition of the ovary in which it is entirely reduced to the state of a diffluent pulp of a yellow, or brownish green colour, of the consistence, and having somewhat the appearance, of very soft putty, immiscible with water. Of this morbid condition," he says, "which, however, may possibly be cancerous, I met with a striking example in a case of sudden death, occurring in the seventh month of pregnancy. Both ovaries were of the size and form of a bullock's kidney, their natural structure was entirely destroyed, and was replaced by the soft substance just described. The circumstance that both ovaries were thus affected renders it evident that the disease could not have existed in any great degree at the time of impregnation, or that it certainly must have been then limited to one organ."—*Op. cit.*, p. 578. (J. C.)

a different interpretation. It is only when a sharply circumscribed tumour, more or less rapidly increasing in size, is discovered in the ovarian region, and the febrile symptoms can be accounted for in no other way, that the disease in question may be conjectured to exist with great probability, and only when there is perceptible fluctuation can it be diagnosed with tolerable certainty. In some cases it is difficult to distinguish simple ovarian abscesses from the pelvic abscesses to which we have alluded: but the latter may be generally known by their perfect immoveability, by their less defined boundary, extreme pain, and considerable hardness.

However intense the symptoms may be in the first days or weeks of the disease in its acute form, they may all disappear, even including those which depend upon the mechanical injuries caused by the tumour, when the local progress is arrested. Thus we have seen patients who have carried abscesses of considerable size in the pelvis for years, and who have attended, in comparative health, to their domestic duties. In other cases such cessations are only temporary, the patients become emaciated by reason of recurrent attacks of fever, and acquire a cachectic appearance, the contents of the pus sac decompose, the surrounding parts are corroded, and the patient dies previous to perforation or soon after it takes place. The occurrence of perforation is generally announced by the inflammatory attacks becoming superficial, by the increase of the swelling, and by considerable fluctuation.

The more considerable the resistance which the adhering organs offer to it, the greater is the local and general reaction. This is particularly the case in perforation of the abdominal wall; least so in perforation of the bowel. The subsidence of the symptoms is more marked after evacuation has taken place. The more completely this is effected, the more benign the character of the pus, and the more acute the whole course has been; while in the reverse condition symptoms of renewed collections of pus, ichorous decomposition, or pyæmic processes set in.

§ XXXIII.

TREATMENT.

In the stage of development the treatment of ovarian abscess coincides with that directed for inflammation; but the result is generally unsatisfactory, because the disease continues to progress. In some instances, however, by a suitable antiphlogistic and a proper dietetic treatment the desirable limits may be placed upon the excessive spreading reaction in the vicinity of the abscess, and the disease thus moderated: and we may also sometimes succeed by the use of mercurials and purgative remedies in rendering the abscess stationary, and so for some time comparative health of varying extent

may be enjoyed, though it is not always in the power of the physician to prevent its disturbance.

In the acute form of the disease, with an apparent tendency to perforation, nothing else remains but to accelerate the external evacuation of the pus by the shortest course, and when the abscess is easily accessible to the knife to make an incision into it as soon as possible. This is easily accomplished in the inguinal and anterior abdominal region, only taking care that no part of the intestine and no vessel is injured. The incision should be made in the place where the pain is most concentrated and fluctuation was earliest perceived. In rapidly increasing abscesses, a moderately wide opening is required, and if healthy pus has been evacuated and the patient's powers are moderately efficient, the healing process is generally tolerably speedy and favourable. Many internal places of perforation—as in the vaginal floor, in the uterus, the bowel, and the bladder—are with difficulty reached or not at all accessible; yet we have opened such abscesses in the first-mentioned place with the desired success. Even division of the rectum, in cases where the abscess lies deep and forms a large fluctuating tumour on the anterior wall of the bowel, is beset with no difficulties, and may effect an essential cure, because in such abscesses we have observed very severe symptoms arising from impaction of the pelvic organs, and very painful congestion of the hæmorrhoidal veins, which quickly disappeared after the evacuation of the abscess. Another condition prevails in

the secondary chronic abscesses of large ovarian cysts. In their case we must not generally be too hasty in evacuating the contents, because the cyst wall is not disposed to heal, and a new accumulation of the secretion takes place, usually followed by softening of the wall, with extensive perforation, and generally fatal peritonitis. In order to ward off these attacks, if possible, we must be careful, after the operation of tapping in cases where an ichorous collection exists, that it be favoured by the free opening of the place of puncture, if possible. Nevertheless it happens, in some rare cases, that after evacuation of a very decomposed ichorous fluid, the new collection becomes benign, suppurative, or serous, and the malady thereupon changes its characters and terminates favourably.

When signs of exhaustion set in before and after the rupture of the abscess, a tonic method of treatment has often been successful. When colliquative symptoms and signs of absorption manifest themselves, opium and the antiseptic remedies have proved most beneficial.

[The author has made but a passing reference to chronic or subacute ovaritis and oophoralgia (the ovarian irritation of *Churchill*, the ovarian pain of *West*); and if he believed in their occasional occurrence as primary affections, he evidently did not place much reliance on the symptoms by which they may be diagnosed from each other, or from some other diseases, as hyperæmia, hæmorrhage, or rheumatism of the ovaries. Although *Scanzoni*, *Becquerel*, *Rigby*, and other recent writers on the diseases of women, make special mention of some of these disorders, particularly chronic ovaritis, we may reasonably doubt, with the author, whether they can be correctly diagnosed by the symptoms such as they detail, so as to be available for treatment. We may also with much reason inquire whether even their pathology is so accurately determined as to make their real nature a certainty. After a careful examination of the British and foreign authorities on this subject to which I have had access, I am constrained to adopt the negative opinion. *Mons. C. Negrier*, in a remarkable memoir of 174 pages, entitled, "*Recueil de faits pour servir a l'histoire des ovaires et des affections hystériques de la femme*," *Prix Monthyon*, 1858,

appears to have had some doubts also on this subject, and has collected a number of cases on which he founds new theories of the curable diseases of these organs. It is almost impossible to give here a *résumé* of the work; at the same time it is somewhat difficult to comprehend clearly all his ideas on the subject: but the work will amply repay an attentive perusal. He says (p. 160), "I make two categories of the curable ovarian affections. I have arranged in the first, under the name of *vésiculites*, all the facts relating to the partial inflammation of the ovaries which result from a modification or morbid alteration of the process of ovulation; in the second I designate, under the new denomination of *ovaire*, the affections for the most part not inflammatory, or rather sub-inflammatory, and essentially reactionary, of which the point of departure *evidently* exists in the ovary." *M. Negrier* (page 156) includes under the denomination of *vésiculites*, 1. Inflammation of the *Graafian* vesicles. 2. Inflammation of the tunic of the ovary and the peritoneum which covers it. 3. Inflammation of the serous membrane surrounding the pelvis. The pathological condition of *ovaire*, as described by *Mons. Negrier*, is not easily made out. It appears that it is an undetermined disorder of the ovaries, which in its progress produces its effects especially upon the ganglionic system, producing all the nervous and other phenomena usually classed under the name of hysteria. It appears, then, that, under the name of *vésiculites*, are included all the inflammatory affections of the ovaries, and under that of *ovaire* those disorders usually termed functional. Although, perhaps, there may be some over refinement of detail in *M. Negrier's* work, by endeavouring to prove that hysteria is essentially an ovarian, and not a uterine malady, the remarks he makes upon this point are not to be lightly passed over. To some extent, his facts are a rearrangement of old ones; yet the classification tends to simplify our acquaintance with an important class of diseases, respecting the pathology of which there are many discordant opinions. In support of this statement I subjoin the opinions of two eminent authorities, Drs. Scanzoni and Farre, on the pathology of some of the more chronic affections of the ovaries. I am far from concurring with the opinion of M. Becquerel (*Traité clinique des maladies de l'utérus*, &c., p. 483, tom. i), as to M. Negrier's theory. "that, fortunately, up to the present period, it is only a myth, against which all the facts known protest, and can only exist in the imagination of the physician of Angiers."

Dr. Scanzoni, writing on the pathology of chronic oophoritis (*op. cit.*, p. 349), says, Henkel justly compares this condition of the ovary to the chronic inflammation of the cellular tissue of other glands; for instance, cirrhosis of the liver and the lungs, many forms of granular degeneration of the kidneys, &c.; wherefore he is not disinclined to designate the whole process as cirrhosis, or granular degeneration of the ovary; and he considers, among other causes, that dysentery affecting the rectum deserves to be mentioned as very frequently producing this form of the ovarian malady. On the other hand, Dr. Farre (*op. cit.*, p. 576) observes, "It must, however, be observed, with regard to the evidences of inflammation of the ovary, either in the acute or chronic form, which are supposed to be afforded during life, consisting in pain and tenderness referred to the seat of that organ, or in obvious enlargements of the ovary, as discoverable by various modes of internal or external tactile examination, and conjoined with more or less constitutional disturbance, that these signs may, and do often, in the

non-puerperal state, accompany the natural process of ovulation, and that such symptoms, recurring with each menstrual period, may affect a woman at intervals in a greater or less degree during the whole of that period of life in which she is capable of child bearing." At p. 577 he adds, "I have been led to the conclusion that certain conditions of the ovary, which, from their concomitant symptoms during life, have been deemed inflammatory, are not necessarily associated with inflammation; that it is probable, first, that the natural process of ovulation is often accompanied by symptoms very similar to those of inflammation; and secondly, that the process of ovulation is occasionally disapppointed or interrupted, and that the follicles, whose natural development has been interrupted, may, like the hydatiform placenta, become the seat of a low form of nutrition, terminating in effusion and collection of various dropsical fluids." M. Aran *(op. cit.)*, in a most able article on this subject, is of opinion that ovaritis is one of the diseases least known in the nosological list, and that it is extremely difficult to separate the physiological from the pathological facts, and still more difficult to distinguish the acute from the chronic form of the disease, also that parenchymatous and follicular ovaritis may be anatomically true, but practically they are of no value, because science does not possess any means for recognising these kinds of inflammatory affections. He considers that in a many cases the ovarian affection is primarily chronic and thus passes into the acute stage, and that therefore the presence of pus is not always pathognomonic of acute ovaritis. He therefore acknowledges the fact that chronic ovaritis can exist, and almost adopts the view of Henkel previously quoted as to its pathology. He states that it often attacks both ovaries, and then it is generally a secondary affection, as it is extremely rare to find chronic ovaritis without also finding catarrhal inflammation of the lining membrane of the neck, and even of the body of the uterus, and frequently of the fallopian tubes. Complications, principally of the peritoneum, he thinks will account for the latent form of the symptoms in some cases, and of their intensity in others; and he combats the opinion of Negrier, that the neuropathic affections have their origin in diseases of the ovaries, and adds, "I pass by all the fantastic descriptions of ovaritis which have been written in the study by physicians whose imaginations are greater than their knowledge of the disease." (P. 585.) He is, however, of opinion that the semeiology of ovaritis is very difficult to define, but he details a long train of symptoms from which he seems to be of opinion that both acute and chronic ovaritis at least may be certainly diagnosed.

These quotations amply warrant us therefore in expressing the opinion previously stated that the pathology and symptomology of the neuralgic, congestive, and primary inflammatory diseases of the ovary are yet imperfectly understood; but the attention that recent eminent authorities have given to the subject leads us to hope that ere long their nosology, pathology, and therapeutical management will be placed on a satisfactory basis.—J. C.

V. SIMPLE FOLLICULAR DEGENERATION (FORMATION OF CYSTS) OF THE OVARIES (HYDROPS OVARII SIMPLEX). PATHOLOGICAL ANATOMY.

§ XXXIV.

The formation of cysts in the ovary is one of the most frequent pathological alterations which are met with. They are developed in the most different number, size, and configuration—with a variety such as is observed in no other organ.

The origin of these cysts has been variously explained by pathologists, and three essentially different views are entertained regarding them. According to one view ovarian cysts originate in a pathological alteration of the *Graafian* follicles, and consequently proceed from preëxisting physiological cavities: acccording to the second explanation they must be considered as new formations, which are generated in a pathological blastema by the endogenous growth of cells or nuclei: according to the third opinion the cysts are also developed from a pathological blastema, but with this difference—the organized elements of the

blastema are arranged in the form of a vesicle, and are ultimately developed into a perfectly closed, resisting membrane.

From what we have observed we have no doubt that all modes of cysts-formation occur in the ovary frequently enough in combination. We will assign our reasons for this belief when we come to describe the separate forms.

In our opinion one of the most frequent modes of cyst formations will be found to depend on simple dilatation of the *Graafian* follicles. There are cases where there can be no doubt of this mode of origin, for in one and the same ovary we may observe follicles which present a progressive enlargement in juxta position with others which still retain their natural size. At the commencement of the disease they can often be raised from the surrounding stroma in the form of shut sacks, but so far as we have observed, no ovum can be discovered in them, even in the first stage of the malady.* In the after course of the disease, when the follicles have attained a considerable size, their walls generally become so intimately united to the proper tunic and the peritoneal coat of the ovary that these parts can only be partially or not at all separated from the cyst wall.

Simple dilatation of the follicles is met with in all stages, and the number of the vesicles involved varies consider-

* In one case, where both ovaries were changed into an aggregation of cysts from the size of a cherry to a nut, *Rokitansky* found ovula distinctly visible in all the follicles situated between those cysts, but they appeared softened, very dull, and easily isolated. In most cases the zona pellucida had lost the sharpness of its outer border, and the germinal vesicle had disappeared in one and all.—*Wiener Wochenplatt*, 1855, *No.* 1.

ably. The disease in its simple form is the same in all these stages. Although in an anatomical point of view a separate description of simple and compound follicular degeneration does not appear necessary, still for therapeutical and diagnostic considerations it will be advisable to make a minute examination of the disease in one follicle. In order to avoid needless repetitions I shall afterwards refer to my observations on this subject, so far as they are applicable to the compound forms of the disease.

A considerable dilatation of a single follicle, which will be considered exclusively in this section, is certainly very rare; the compound forms are more frequently met with. But it must not be overlooked that we also include among the simple forms those cases where, besides great enlargement of one *Graafian* vesicle, the other follicles also are considerably dilated, because it is impossible to make such refined distinctions at the patient's bedside. The form which now occupies our attention, however, is met with very frequently, and its practical importance is so great as to merit our especial attention.

It results from the foregoing observations that simple follicular degeneration attains very various sizes. According to our own observations this in some cases may be so great that the fluid contents weigh more than forty pounds,* but it must be observed that when the cysts are uncom-

* Simple follicular degenerations of such a size must occur very rarely, for the largest which we have seen was as large as a man's head, and contained about twelve pounds of fluid. This is in accordance with the experience of T. S. Lee, Bright, and others.—S.

monly large, endogenous new formations are often developed in them, by which they are more or less deprived of their simplicity. The smaller the cyst is, the less it is liable to change its original anatomical character. The ovary, too, which, when the degenerated vesicle is not very deeply embedded, is placed undermost, presents no essential deviation from the normal condition; and this is particularly the case when the degenerated follicle rises in great part above the level of the peritoneal covering. This elevation of the cyst is often produced thus: in the advanced course of the disease the follicle forms a pedunculated cyst, resting upon the unaltered ovary; and in consequence of the tension and loosening which its pedicle undergoes it entirely loses its original site. In opposite cases, however, the wall of the follicle next becomes hypertrophied, the ovary then enlarges also, and is stretched in the direction of its long diameter. Its stroma forms a part of the inferior covering of the cyst, whereby the walls of the latter are more or less thickened. The fallopian tube of the corresponding side is lengthened, and appears firmly united to the anterior surface of the cyst. The broad ligament is also stretched longitudinally. The uterus is generally elevated and anteverted, and so much lengthened that it often attains double its normal dimensions. It is also found generally in a relaxed blenorrhoic condition. Simple cysts are often free from peritoneal adhesions. When this is the case they generally lie behind the uterus, more or less in the median line of the abdominal cavity. When they are of small

size they are most frequently found in the space of *Douglas*. As their size increases the intestinal canal is pushed upwards and backwards, and then the cyst is situated more or less against the anterior abdominal wall. The requisite description of these various relations and deviations in the positions of the pelvic structures has already been given (§ I). What has been said there will find its full application here.

When the ovarian cyst occurs as the result, or is accompanied by symptoms, of an oophoritis in which the peritoneal coat was chiefly implicated, we find intimate adhesions with the surrounding structures, even when the cysts are of very considerable size. In consequence of these adhesions the position of the cysts becomes more lateral, and their mobility is lost. As their growth advances, these cysts in some cases are torn from their places of adhesion, and they again become partially or wholly free. In other cases a different condition prevails. Adhesion first takes place as the sequel of secondary peritonitis, which may originate in a variety of ways, in that stage of the disease when the cysts have attained a considerable size. These facts are readily determined in the dead body from the age and extent of the adhesions, for it is obvious that an extensive hydroarium comes into contact with more parts than a small one. Large hydro-ovaria are often found intimately adherent to the under surface of the liver, to the stomach, a great part of the large intestine, to the lumbar portion of the peritoneum, and the whole anterior abdominal wall. When the walls of the cyst are very thin, it may happen

that, in opening the abdominal cavity, the cyst wall may be quite overlooked, and it may be imagined that ascites is present. However intimate the adhesions may be with the structures which have been mentioned, the small intestine, as we have already stated, generally remains free from adhesions.

The anatomical character of the walls of simple cysts undergoes various alterations, which are caused by their growth, by the duration of the disease, by the properties of their contents, and by the occurrence of inflammation, also by the original site of the follicle, its shallow or deep situation in the stroma of the ovary. Thus we find that the walls of a follicle superficially situated are generally thin, and that the peritoneal coat, even when the enlargement is inconsiderable, has disappeared, so that it cannot be anatomically demonstrated at all, or not without difficulty, while the ovary itself, as we have stated before, is little involved. On the other hand, when the follicles are situated deeper, the parenchyma of the ovary is subjected to more or less tension, and forms round the base of the cyst a more or less thick fibro-cellular layer, which is often very considerable towards the base of the tumour. The upper portion of the cyst is generally the thinnest. In some cases the wall is so thin here that a slight degree of force is sufficient to destroy it.

However simple the wall of the cyst is in many cases, it may become just as compound after long duration of the disease. This is caused partly by simple hypertrophy, by extensive deposits of epithelial layers on the internal surface,

flaky exudations, or even large knotty, fibrinous concretions, the sequel of inflammation. Pus and ichorous fluid also occur. We also often find very large concretions of hair and fat; sometimes, but more rarely, bones, teeth, or even the organic formations of more composite structure.

Of all these various cases those only in which the contents are fluid require to be considered in this place. For practical reasons, chiefly, we shall endeavour to make a minute investigation of these deviations at another time.

The physical, as well as the chemical, characters of the contents present great variety. As regards these, we have to remark that in simple cysts they are generally less various and compound; for we have evacuated simple cysts in which the fluid was perfectly clear, and which, when chemically examined, was found to consist almost wholly of pure water, and contained traces only of other constituents. However, in some cases, very important variations take place, especially as regards the albuminous and sanguineous contents which may be present in different stages. The deepest colours of the fluid depend upon their being intermixed with blood, which is sometimes present in considerable quantity, and may be microscopically recognised in the form of altered blood corpuscles. The viscidity is caused by a large quantity of albumen, or by mucous matters. The colour may also be produced by the colouring matter of bile. The organic and inorganic matters contained in the fluid are very various. Among the latter, the chloride of sodium, sulphate of potass, carbonate of soda,

ANALYSIS OF THE LIQUIDS OF OVARIAN CYSTS.

FROM L. A. BECQUEREL *(OP. CIT.)*, VOL. II, P. 224.

Source.	Punctures.	Characters of the liquids.	Density.	Water.	Solid matters.	Pure albumen.	Fibrine.	Fatty matters.	Salts.	Remarks.
9. Unilocular cyst punctured.	1	Clear and transparent.	1026.38	946.732	53 268	43.130	—	—	—	No analysis for fibrine, fatty matters, and salts.
10. Age 34. Died in the hospital. An unilocular cyst punctured five times; towards the last complicated with ascites.	1	Always clear, but viscid, thick, ropy, and sticky.	1029.09	958.950	41.050	29.133	—	—	—	— —
	2		1028.985	959.200	40.800	28.605	—	—	—	— —
	3		1028.942	959.292	40.708	29.435	—	—	—	No researches for fibrine, fatty matters, and salts.
	4		1028.235	964.025	35.975	24.315	—	—	—	— —
	5		1028.850	966.546	33.454	22.615	—	—	—	— —

[The preceding table respecting the physical and chemical characters of the liquids contained in simple and compound cysts, is the most extensive hitherto published. M. Becquerel informs us that these results are extracted from an unedited work by Dr. Vernois and himself. Becquerel (*op. cit.*, p. 222) makes some comments on the table, from which the following facts are extracted: Unilocular cysts do not contain exclusively serous and albuminous fluids. When the cysts are numerous and non-communicating, the contents are sometimes similar, at other times very different. In the latter case one cyst may enclose clear, transparent, albuminous, and not very dense serum; another a thick, ropy, viscid fluid, more or less brown in colour. The contents of simple and proliferous cysts have the same composition; the difference consisting in the concentration of the solid parts. The reaction is alkaline or neutral, never acid. The clearest liquids possess a special viscidity, but this is not due to gelatine; it is owing to one of three circumstances: 1. A peculiar state of the albumen. 2. The presence of a large quantity of extractive matters. 3. The presence of fat, and especially cholesterine. Fibrine is often absent, and when present it is in very small quantity. The salts and fatty matters have presented great and singular varieties. Fatty matters are especially abundant in ropy and viscid liquids.—J. C.]

and the phosphates predominate. We have stated before that when the cysts are filled with fat exclusively, the occurrence of cholesterine in crystals is not rare.*

§ XXXVI.

ETIOLOGY AND SYMPTOMS.

Respecting the etiology, we refer to what has been stated in our general observations in § VIII. We will only remark here that simple follicular degeneration is observed, although very rarely, in all periods of life, and even in the earliest youth. The youngest girl, however, in whom we have observed the disease in great intensity, was fourteen years of age. More frequently the disease comes on after the twentieth year; which holds good, not only in simple, but also in compound cysts. There is a very rare preparation in the Museum of Prague, of a cyst formation in a child only one year old. We also opened the body of a fœtus, in Wurzburg, in which cysts were present in both ovaries.

Nothing tenable has as yet been advanced as constituting a special constitutional cause of this disease: even its original relation remains obscure in most cases; because

* Our friend and colleague, Scherer, has, at our request, in the course of the last three years, made an extensive series of chemical analyses of such fluids, the result of which he will soon publish, by which the above statements by Kiwisch are essentially modified.—S.

its origin is usually so insidious, not even perceived by the patient herself, that it has made considerable progress before it comes under observation. It is only when it breaks out with marked inflammatory symptoms, that injurious etiological influences, similar to those we have described in the origin of oophoritis, can generally be recognised.*

Inflammation of the ovary, as well in its peritoneal as in its follicular form, appears to cause dropsical enlargement of the *Graafian* vesicles, primarily by the difficulty it causes in the evacuation of the follicles by hypertrophy of their walls and surrounding parts. The circumstance is not to be overlooked that cyst formations have occurred more frequently from dysmenorrhœa. But even this incident can furnish no sure data, since the reverse has also been observed.

As regards sexual intercourse, we have to remark that we have observed cyst formations in the perfect maiden condition; but by far more frequently in the opposite state of the sexual organs. A great number of them occur after delivery. In all cases where the disease occurs in the years of decrepitude, we must look upon them as proceeding from an earlier period of life, although there may have been

* There is no doubt that dropsy of the *Graafian* vesicles is sometimes caused in this way: the menstrual congestions in the ovaries do not attain sufficient intensity to effect the rupture of the follicular wall, and the result is that an increase of the secretion and its accumulation in the cavity takes place, the wall of which is gradually hypertrophied, and by the formation of new vessels causes a permanent increased secretion. The comparatively great frequency of these follicular dropsies in women who have suffered for a long time from chlorosis or other diseases, combined with amenorrhœa, certainly speaks in favour of this view.—S.

no symptoms of them during that time, because we know from physiology that the regeneration of the follicles ceases in advanced age.

§ XXXVII.

The train of symptoms in the several cases is very various. It often consists of those phænomena which are peculiar to the commencement of the disease, when it is accompanied by signs of inflammation and congestion. These manifestations, however, are absent in many, indeed in the majority of cases, because the disease frequently comes on insidiously, as a simple anomaly of the vegetative process, without any inflammatory indications. A second train of symptoms is produced by the mechanical influence which the enlarged tumour exercises upon the surrounding parts; a third by the consecutive inflammatory attacks; and, finally, the various terminations and complications with other diseases give rise to a fourth.

The first series of symptoms, as we have just stated, is often absent. They present various degrees of intensity, and commonly break out at a catamenial or puerperal period, when they appear under the form of oophoritis, as we have described. At this time it is generally quite impossible to predict the subsequent form of disease with any certainty, because not only simple cysts, but also the

compound forms, as well as the other simple forms of oophoritis, are ushered in in a similar manner. The diagnosis, therefore, cannot be made until the cysts can be recognised as such. In connection with this, we observe that, in some instances, a large cyst formation is developed very rapidly. Thus we have seen a cyst from the size of a fist to that of a child's head appear in the course of from ten to twenty-four days, accompanied by severe local and general symptoms. Its daily enlargement was easily demonstrated by examination.

In a great majority of cases, however, the development is slow, although the local inflammatory indications are very considerable, so that extensive and protracted peritonites occur. In other cases the local phænomena remain sharply circumscribed; they have shorter or longer intermissions, and recur in the form of paroxysms. We have known individuals who had a recurrence of the attacks during each catamenial period; while others suffered only once for some weeks in the course of the year, or a relapse took place only in consequence of external injuries. In two cases we observed, on the occurrence of conception, the disease was reëxcited and abortion produced. All these symptoms, however, are met with in compound ovarian cyst formations also.

It sometimes happens that the cyst formation, although at its commencement it is attended with very severe local and general symptoms, entirely loses them in its after course; but its growth continues to progress, and a much simpler form of disease results.

In other cases, as we have already stated, the patients are not at all conscious of the first appearance of the disease, or the indications of it are so inconsiderable that they do not permit of any definite explanation. We come next to the second series of symptoms, which proceed from the mechanical influence of the tumour upon the adjoining parts. However, this by no means depends upon the size of the cyst. Indeed, on the contrary, the most severe manifestations are often caused by the small free cysts, particularly when they are situated in the cul-de-sac behind the uterus. They are principally caused by compression of the rectum, the bladder, the uterus, by the tension to which the space of *Douglas* is subjected, and by pressure upon the pelvic vessels.

The most distressing symptoms are generally those of compression of the bladder. When the cysts are situated high in the pelvis, they manifest themselves often by enuresis; and when the tumour lies lower there is, in some cases, complete ischuria. Not less distressing is the persistent pain in the sacral region, which, in some instances, radiates to the inguinal and femoral regions. It may prevent the patient from walking upright, and even make it very difficult for her to lie on either side. When the growth of the cyst is rapid, we have often seen these symptoms so severe as to exhibit all the characters of retroversion of the uterus, with which the affection has not unfrequently been confounded.

All these sensations may be moderated in the course

of this disease, because as the cyst enlarges it rises out of the pelvis and enters the inferior abdominal region, after which the patient feels relieved. This, however, is not always the case, because the cysts are sometimes wedge-shaped, when the thinner portion always dips more or less into the pelvis. Sometimes, in consequence of the great flaccidity of their walls, they are pressed into the pelvis by the action of the abdominal muscles. Hence the symptoms of tension and pressure downwards are proportionately exaggerated. Very considerable prolapse of the vagina and of the lower segment of the uterus, in some cases, also, prolapse of the rectum, with all their consequences, are produced; on the other hand, the higher the cyst is situated, those affections of the rectum and bladder, and the symptoms of compression of the nervous and vascular trunks of the pelvis, are more likely to be absent in the case of the simple free cysts.

When anasarca of one or both lower extremities occurs in the course of extensively developed disease, it must be regarded chiefly as a symptom of a highly developed hydræmic dyscrasia rather than the consequence of vascular compression. When the cyst becomes so large that it far exceeds the size of a pregnant uterus at the full time—in which case, however, as we have already stated, it generally loses its simplicity—symptoms of compression of the abdominal and thoracic organs gradually begin to appear. They become alarming, however, when the disease has attained an enormous development. When its course

is less rapid, compression is compensated for by a corresponding distension of the cavities. When the disease proceeds still further, the digestive powers become injured, at least to such a degree that the patient can take only small quantities into the stomach, and any considerable formation of gas causes considerable tension; while the respiration and circulation are impeded by compression of the lungs and displacement of the heart. The lower parts of the lungs are first exposed to compression, and gradually become airless and atrophied, while the upper parts, thrown into excessive action, incline to emphysematous dilatation. By this means a favourable symptom is occasioned; namely, that tuberculous deposits do not readily occur in the lungs of such individuals; on the other hand, compression often goes so far that severe asthmatic attacks are produced, and even suffocation may be caused, particularly by the intercurring cough. In consequence of such disturbances of respiration the whole system suffers at the same time, and this disturbance, in the further course of the disease, generally leads, sooner or later, to symptoms of hydrœmia and dropsical effusions.

With these symptoms is combined the peculiar distension of the body, and the ailments which proceed from the weight of the tumour and from sympathetic attacks. The form of the body always corresponds to the kind of cyst formation; it is commonly spherical or cask-shaped, and symmetrical; but when the cysts are small and laterally situated, one side forms a protuberance over the other.

When the walls of the cyst are flaccid, the abdomen is also somewhat flattened. The patients experience the greatest difficulty in walking or standing in proportion to the weight of the tumour; indeed, in very extensively developed forms, they are uninterruptedly confined to bed. In some instances, however, we are astonished to perceive how actively some patients, suffering as they do from tumours which have attained a weight of from twenty to forty pounds, move about, and having become accustomed to their burden, they do not complain of any special illness. The sympathetic attacks proceed from the adjoining structures, and are manifested by various, often very unpleasant, symptoms. Thus the tension and compression to which the uterus is generally subjected, frequently cause very distressing pains similar to those of labour, which in some instances we have seen return periodically: in one case they rose to the severity of a true expulsive pain. The intestinal canal and the bladder also are often sympathetically attacked. Nausea, actual vomiting, disturbances in defæcation and micturition take place, often in transitory but sometimes in long-continued attacks; and in some cases, also, in periodical returning paroxysms.

A third group of symptoms proceeds sometimes from the consecutive inflammatory attacks, and from the symptoms of exhaustion which gradually set in. This group occurs spontaneously in certain cases. More frequently it is produced by operative interference, and particularly by the performance of tapping. The external inflammations, that is, more or less extensive peritonitis, occur sponta-

neously, especially when the growth of the cysts is rapid—they result in various adhesions, and are attended with more or less severe pains in the corresponding region. In the chronic course of peritonitis, however, the pain may be entirely absent, although the inflammation may be so severe that it causes extensive adhesions of the cyst to the adjoining parts. On the other hand, spontaneous inflammation of the internal wall of simple cysts is a much rarer phenomenon. Not unfrequently we find them taking place as the result of artificial evacuations, in consequence of which the contents, as we have already stated, may assume a variety of properties. The more rapidly the inflammatory product is deposited, and the more plastic it is, the more severe are the febrile symptoms which accompany this process, and so much more rapidly does it induce the phænomena of anæmia.

Inflammation of the internal surface of ovarian cysts, so long as it does not extend to the external surface, generally manifests itself by no local pain; so that the local symptoms may go on quite unperceived, and only those pertaining to the general system attract attention. These are sometimes difficult of explanation, and we have observed that while patients of this class are treated for a long time for gastric, rheumatic, or nervous fevers, the seat of the disease, namely, the ovarian cyst, is entirely overlooked.

Finally, to these symptoms are related the terminations and healing processes, which we consider necessary to describe in a special chapter.

§ XXXVIII.

TERMINATION AND HEALING PROCESS OF OVARIAN CYSTS.

As regards its duration and danger to life, the course of the disease is very different. Many cysts attain a moderate size only, then become stationary, and injure life and health in no perceptible manner. The individual affected with it dies of other diseases which have no relation to the ovarian malady. In other cases the cysts maintain a steady growth which cannot be arrested. This growth generally takes place at intervals. The pauses which occur are of various length, often continuing for years. The more rapid the growth is the more severe are the attacks of inflammatory irritation and anæmia which occur, and then the patients sink under symptoms of peritonitis or under the attacks of hydrœmia on the occurrence of dropsical effusions. Such cases, as we have already stated, are observed very seldom, because these terminations are generally modified by the interference of art. Death may also take place in consequence of spontaneous rupture of the cysts, of inflammations of the cysts with profuse fibrinous exudations, or of pus or ichor, as the sequelæ of perforation, followed by peritonitis, or exhausting discharges of pus externally. But all these events are very

rare in simple cysts, and are observed more frequently in the compound.

As to the *curative processes* which we know do take place in cyst formations, their occurence is exceedingly rare, and spontaneous cures in particular are generally imperfect.

First of all we must express our dissent from the opinion of those practitioners who assume that an ovarian cyst can be completely removed by simple absorption. So far as we know this process has not been satisfactorily demonstrated by a single case; but it must not be overlooked that, by excessive absorption, a not inconsiderable diminution of the cyst may indeed often be effected.*

This diminution is anatomically demonstrated by the flaccid and plicated condition of the walls of many cysts, which previously were apparently more distended and tense. This is made still more apparent by the fact that in consequence of the elasticity of the cyst walls a considerable diminution of the contents must always take place before the flaccidness becomes marked. Diminution in size, and flaccidity of the tumour, which in some cases is so considerable that a cyst which was previously distinctly perceptible after the course of some time can be detected with difficulty, or not at all, by examinations through the abdominal integuments. But this diminution never attains so considerable a

We have observed cases in which the fluid within the cyst underwent a formal periodical increase and decrease. The tumour commonly enlarges before menstruation in consequence of the congestion occasioning a more copious secretion from the wall, and some days after the disappearance of the hæmorrhage its volume again decreases considerably.—S.

degree that the normal condition may be restored by means of it, as some have assumed. Besides, it always involves the possibility of re-accumulation, and cannot therefore be considered as a curative process, although it may take place and continue for a long time with essential relief of the symptoms. As the smaller flaccid cysts are difficult to detect through the abdominal parietes when they are thicker than usual, it was natural that this process should be regarded clinically as a cure.

In other cases the diminution of the cyst is combined with metamorphosis of its walls, and it is then more permanent. This is most marked when ossification takes place, which always causes a considerable contraction of the walls, and diminution of the cavity of the cysts. When ossification is perfect it undergoes no further enlargement. Partial deposits of osseous and cartilaginous masses and other hypertrophies take place simultaneously with the shrivelling of the walls, especially in aged individuals: in young persons, in consequence of inflammations, a condensation of the walls, and probably a metamorphosis of their acute inflammatory disease. The cyst grows rapidly, and the adjacent parts, in consequence of the strong tension exerted on them, are also more or less intensely inflamed; adhesions form in the surrounding structures, and inflammatory softening, followed by perforation and an external discharge of the contents through the adjacent parts, takes place. The perforation is generally short and simple; collapse of the cyst and rapid amelioration also suddenly

occur, which, in some cases, terminate in a perfect cure by obliteration of the cavity, or relapses take place sooner or later. The relapse may suddenly set in even after a long continuance of health, and lead to a similar course. Thus we observed such a recurrence in a clinical case after two years of perfect health, which, after evacuation through the rectum, soon terminated in reconvalescence. In a second case the relapse took place four times in five months, followed by a perfect cure.

In the less favourable cases chronic perforation takes place in various ways, but most frequently through the rectum. In these cases the inflammation is circumscribed and lingering. It terminates in the formation of fistula, sinuses, and often by perforation in several places. The perforation is generally small and the evacuation imperfect. The inflammation of the surrounding organs is combined with the formation of abscesses and ichorous fluid. These abscesses discharge their contents cotemporaneously with the fluid of the cysts, or sometimes through an independent opening. The discharge either continues a long time, or contraction of the perforated place followed by the reaccumulation of the contents of the cyst, and a relapse shortly takes place, which may sooner or later lead to exhaustion of the patient. But in some rare instances perforation also leads to subsequent contraction of the cyst and to the amelioration or cure of the disease.

Lastly a much more rare process is the evacuation of a large cyst by extensive rupture and discharge of the

contents into the peritoneal cavity. Sometimes the occurrence of rupture is favoured by the action of external mechanical force. In other instances, however, it appears to have been only the consequence of the distension of a thin-walled cyst. Thus we have known it produced in one case during the traction which we were obliged to use during the employment of the forceps in consequence of retarded labour, and in which a fatty tumour, about the size of a head, lay over the pelvic inlet with the child's head. The rupture, as revealed in the autopsy, took place in the whole length of the cyst, and a great part of the adipose and capillary masses fell into the abdomen, by which a rapidly fatal peritonitis was produced. In another case, in lifting a slight weight, a hydro-ovarium, of the size of two heads, burst, and death also followed, in consequence of peritonitis. A considerable number of cases are to be found published (*Camus über Rupturen der Ovariencysten; Révue Médicale*, November, 1844. J. Wilkins. *The Lancet*, June 1st, 1844), in which, after the occurrence of rupture of large serous cysts, the life of the patient was spared, and even in some cases the reaccumulation of the contents did not take place for a long time.*

The symptoms immediately following ruptures have

* Tilt, in a series of papers (*On the Rise, Progress, and various Terminations of Chronic Ovarian Tumours. London Medical Gazette*, 1851, Jan et seq.), published an interesting collection of seventy-one cases, in which a rupture of the cyst, with discharge of the contents into the abdominal cavity, took place. Of these seventy-one cases, thirty terminated in perfect recovery, nineteen with permanent amelioration, and twenty-two with a fatal result. (See *Canstatts Jahresbericht* for 1851, vol. iv, page 300 et seq.)—S.

always been very severe, marked by general collapse, some pain in the abdomen, and marked change in its form. After the lapse of from twenty to thirty hours, however, on the occurrence of profuse diuresis, the symptoms apparently subside, and just as rapid an amelioration sets in, although in the majority of instances the disease returned, and in some instances a second rupture happened. The severity of the reaction and its mortality, especially in these ruptures, depend chiefly on the properties of the discharged fluid; so that in simple serous fluid the course was frequently favourable; in suppurative, ichorous, or otherwise irritating fluid, the termination was always unfavourable.

Curative processes, similar to those above described, have also been produced in some cases by art. Thus, after tapping, a more or less permanent collapse of the cyst, with a gradual reaccumulation of the contents, occurred; in other cases, a considerable shrivelling and condensation of the cyst wall; or an intimate adhesion to the surrounding parts, with a consequent diminution in the capability of distension; or, finally, even obliteration of the cavity happened, followed by a perfect cure, as we shall mention in complete detail in the therapeutical part.

§ XXXIX.

It still remains to make some observations upon the

CONDITION OF THE SEXUAL FUNCTIONS AND UPON THE GENERAL STATE OF HEALTH IN HYDROPS OVARII.

First of all, it is to be remembered that the catamenia may continue perfectly regular, although the ovarian disease is very considerable. On the other hand, if the ovarian malady is the result of a great disturbance of menstruation, or is combined with metritis or any other uterine affection, the most various irregularities of the catamenia may accompany the formation of cysts. We have observed amenorrhœa and dysmenorrhœa, also menorrhagia and metrorrhagia; but in these cases it may happen that, during the after-course of the ovarian malady, the catamenia become perfectly regular again. In some cases, where there is rapid growth of great ovarian cysts, either scanty menstruation or even complete suppression of the menses takes place in consequence of the poverty of the mass of the blood. But it is to be observed that this is the case much more frequently in compound tumours of the ovaries than in simple cysts; so that this symptom is not without its value in the diagnosis and prognosis. A frequent symptom, caused by tension of the uterine parenchyma, is a

more or less severe phlegmorrhœa, or even blenorrhœa, of the uterus. It has been assumed that, in simultaneous degeneration of both ovaries, amenorrhœa must always exist. Although this symptom is generally observed, we treated a patient in whom this was not the case; so that we cannot turn this symptom to much account with certainty in the diagnosis.

As regards the capability of conception, it is suppressed in all cases where both ovaries are diseased, from causes previously stated. In disease of one ovary, however, it may continue as long as the uterus is not subjected to great pressure. The size of the tumour has less influence. We have seen pregnancy occur in compound cysts above the size of an adult's head; while other women affected with tumours the size of a hen's egg were barren. In some cases the course of pregnancy was disturbed by the tension exerted on the uterus; while in other cases it went on to its normal termination, with more or less disagreeable symptoms: but, in the majority, delivery was naturally accomplished. In isolated cases only, especially small, deep-seated tumours, a more or less injurious delay in the birth occurred, as was demonstrated, among others, by the case already given of rupture of an adipose cyst during parturition. Not unfrequently a marked increase, or even an inflammatory irritation of the ovarian cyst takes place after delivery.

In some patients the breasts sympathise in a very marked manner with the ovarian disease. We have observed

not only painful intumescence, but even a copious secretion of milk which continued for a long time, and at last disappeared without any perceptible cause. Since the areolæ of the breasts are not unfrequently somewhat dark coloured, these signs often lead to errors in diagnosis. In the majority of cases, however, the breasts present no change.

At first, the general health does not suffer in the least, except in those cases where topical inflammatory symptoms, and especially extensive peritonitis, usher in or accompany the formation of cysts. Even in colossal distensions of the follicle, which far exceed the size of a pregnant uterus at the full time, we often find the appearance of the patient remarkably good, and the functions of the rectum, the urinary passages, and the sexual organs normal. It is only when the tumours grow rapidly or fill again after the occurrence of spontaneous or artificial evacuations, that a more or less extensive emaciation and disturbance of digestion is produced. Not unfrequently it is only the depressing moral impression this disease makes upon a sensitive patient which produces a general emaciation, while the medical treatment may produce it still more deeply. When consecutive peritonitis, or inflammations of the internal surface of the cysts occur, they produce those symptoms of feverish exhaustion of strength which we have already noticed.

§ XL.

DIAGNOSIS.

In a prognostic, and still more in a therapeutical point of view, it is important to distinguish with certainty the simple ovarian tumour from other tumours of the ovaries and pelvis.

In the diagnosis three things ought to be ascertained: first, that a tumour does exist; second, that it belongs to the ovary; and, thirdly, that it is a simple cyst.

1. It is easily proved by external examination that a tumour is present in all those cases in which the enlargement has reached the size of a child's head and is tense, and the abdominal coverings thin, flaccid, and not painful. In the reverse conditions the diagnosis of a tumour, even of considerable size, may be beset with great difficulties; especially the detection of flaccid, thin walled cysts, although they have attained the size of an adult's head. The examination should always be made after evacuation of the rectum and bladder, and when the abdominal integuments are in a flaccid condition. On making deep pressure upon the abdominal parietes, either greater resistance only or a sharp circumscribed tumour is met with in the corresponding region. On the other hand, in particularly favourable conditions, ovarian tumours of the size of a hen's egg, and even smaller, may be distinctly felt and examined.

In cysts which have the size of a child's head, percussion may be employed as a means of diagnosis, because the diseased ovaries, as we have already stated, very soon come to lie against the anterior abdominal wall. As free ovarian cysts are always situated more or less in the median line of the pelvis, while the smaller tumours, bound down by exudations, generally lie laterally, this circumstance is to be taken into account in the external explorations. The external examination should always be completed by the internal; and indeed, the size, the position, and form of the tumour present is often much easier and more minutely made out by the internal than by the external examination, and it seldom happens that the internal examination is wholly without result.

2. Whether the tumour belongs to the ovary can only be made out by the dislocation of the internal sexual parts which have taken place as described in § IV: and we will only observe here, referring to what has been said, that in simple cysts the position of the tumour is most frequently found to be behind the uterus, and that they are generally deeply situated in the space of Douglas, whence prolapse of the vagina and lower segment of the uterus to a greater or less degree may be caused. On the other hand, large cysts with tense walls lie for the most part, or even wholly, above the pelvic inlet, and admit of extensive movements in the abdominal space, when their pedicle is thin and they are not of enormous size. In these cases the demonstration of an ovarian disease can only be given with great probability,

because the more extensive movements of the uterus communicate with the tumour. If peritonitis sets in at the commencement of the disease the simple cysts are situated laterally to the uterus, and are more or less intimately adherent to it, in which case exploration with the uterine sound is the only means whereby any conclusion as to the seat of the disease can be come to. The examination with the hand as to the position of the uterine body generally furnishes no more certain information. At length, when the cysts become so large that they fill the greatest part of the distended abdomen, they not only become immoveable, but their boundaries, which are covered by the ribs, cannot be made out by palpation; in which case percussion is the only means whereby any evidence of their presence can be obtained, while fluctuation proves the existence of fluid. But with all this, the diagnosis of a cyst is not yet certain, because these phænomena may be caused by simple ascites and other peritoneal exudations and cyst formations.

3. The diagnosis of the simplicity of the cyst is in most cases difficult, and must be founded on the following essential points: 1. Complete uniformity of the surface, and the resistance of a more or less round tumour as made out by internal, as well as external, exploration. 2. Distinct fluctuation in all directions, in which the cyst is accessible to examination. However easily this phænomena may be investigated in the larger cysts, it is just as difficult in the smaller and deeply-seated, in which case fluctuation is generally detected only by the peculiar compressibility of

the tumour. When simple cysts dip into the pelvis, they often present signs of fluctuation more distinctly in the examination through the vagina or the rectum. But it must be observed that large compound cysts also may present a distinct feeling of fluctuation on percussion in the whole circumference of the tumour and in different directions, and, therefore, fluctuation *per se* cannot easily be made of value in the diagnosis. Consequently (3), the only certain proof of the simplicity of a cyst is that afforded by tapping in those cases where it is permitted, and the evacuation of the cystic cavity effected thereby. 4. The following facts are not altogether without value in the diagnosis: a moderate size of the tumour, position in the median line of the pelvis, little inconvenience to patient, absence of œdema of the lower extremities, slow development of the disease, and continuance of the menses; though these symptoms cannot, in any case, afford certain data on which to ground a diagnosis.

§ XLI.

PROGNOSIS.

The most important data for the prognosis are derived from the investigations made upon the course of simple follicular degeneration and also from the following therapeutical examinations, and therefore we will confine ourselves to

some general observations. However distressing the local attacks may be in the case of some patients affected with small or large ovarian cysts, still the disease may coexist with perfectly normal conditions of other parts of the body. The simple form first becomes dangerous to life when it interferes with the functions of important organs by its great size or rapid growth, or causes anæmia. It is only in very rare cases that it proves fatal by the spontaneous occurrence of peritonitis; sometimes this course is induced by internal inflammation, ruptures, or perforation of the cyst wall.

More frequently the fatal course is occasioned by the interference of art; still the danger is less in this case than in similar operative procedure in the more compound cysts. In a great number of patients the simple cyst formation undergoes only a very gradual increase, or remains stationary for a long time in a certain stage of development, and after a long duration of life they are frequently carried off by other accidental diseases. On the other hand, in a considerable number of cases, the simple ovarian affection degenerates and becomes compound, and under these circumstances the prognosis is very different, as we shall afterwards mention.

How far a natural cure may be expected has been already discussed in § XXXVIII, and how far art can overcome this disease we shall endeavour to investigate in the following observations.

§ XLII.

THERAPEUTICS.

We proceed to the treatment of simple follicular degeneration under very different clinical conditions. Cases occur where the disease at its very onset, when the diagnosis cannot be made out with certainty, gives rise to disagreeable or dangerous symptoms which must be combated. In other cases it is quite overlooked at its commencement, and does not attract the attention of the patient and her medical attendant until it has made considerable progress.

In all cases in which the disease is so little developed that it is more or less inaccessible to diagnosis, it is obvious that a specific treatment cannot be thought of, it must generally be treated symptomatically. Most frequently we have to do with more or less extensive inflammatory attacks; in some cases, too, with symptoms of wedging and compression of the pelvic organs. In the first case, the treatment which we have recommended for oophoritis comes into application; and it is to be employed with so much the greater care the more we have reason to apprehend a permanent organic change of the ovary. This treatment appears to have been successful in checking the further progress of the disease, and even to have effected a not inconsiderable diminution of the tumour.

In other cases, and certainly in the majority, the result of this treatment was confined to the alleviation of the external inflammatory attacks, while the dropsical enlargement of the affected follicle was not checked; here, as also in those cases which were subjected to treatment after a more considerable development of the disease, a curative treatment was generally resorted to, which, it was hoped, would favour absorption of the effusion.

It results from what we have said upon the natural healing process, that since we cannot expect a radical cure by simple absorption in ovarian cysts, consequently we cannot be certain of effecting it by therapeutical remedies. The only thing which appears to be attained by nature and often by art also, without an organic change of the cyst wall, is bringing the tumour to a stand-still, and, in a favourable case, effecting as much as possible the diminution of the cyst.

This result has often been attained by a proper dietetic treatment, by the most careful removal of all injurious influences, and by an assiduous application of remedies which favour the secretions, or which generally diminish nutrition or divert it into another channel. We have observed a remarkable decrease of large cysts after the long use of saline mineral waters, and once after a long continued starvation. The administration of diuretic and drastic remedies, the use of mercury and preparations of iodine, have also been attended with some success. To these remedies may be added an extensive series of special drugs

which are said to have assisted in some cases; however, their action can only be explained by the fact that they are similar to those which may in general be recognised as often successful, whence they altogether lose their specific influence; still it is not to be forgotten that the choice of remedies may be essentially modified by the individuality of the patient, and is therefore not altogether indifferent.

More successful results (according to what we have said on the natural cure, § XXXVIII) may be obtained by the production of a favourable metamorphosis of the cyst. The introduction of such a process should therefore be the immediate object of art. To produce this metamorphosis by internal remedies appears to have been in the great majority of cases beyond the reach of art, and in the few cases in which simple or compound cysts are said to have been removed after the use of internal remedies, the process of cure either remained unknown to us, or its more intimate relation to the case was very problematical, because the same treatment repeatedly tried in many other similar cases was of no service whatever.

Therefore we must unfortunately confess that hitherto not much progress has been made as to the radical internal treatment, or even in the essential amelioration of the more developed forms of the disease. Notwithstanding this great uncertainty of our therapeutics we must still, out of humanity, make frequent careful attempts at cure in our patients, and repeat them so long as it is not permitted us to adopt another, namely, an operative treatment; because,

on the one hand, it appears that in some cases essential results have been obtained, and the progress of the disease checked, by the internal treatment, while the moral power of the patient is often degraded in a very sad manner by the loss of hope on the part of the physician.

With reference to the internal treatment, the following facts are the most important:

1. The utmost possible certainty of diagnosis in order to guard against the frequent self-deceptions as to the result of the treatment.

2. A careful watching of the increase and decrease of the disease. For this purpose one must make, at repeated times, a very minute measurement of the circumference of the body, and observe the results of percussion, &c. When the disease goes on steadily increasing, the prognosis and treatment are often very essentially changed; when enlargement takes place by fits and starts, it requires us to investigate the special conditions of these exacerbations, and, if possible, to remove them: on the other hand, when a perceptible decrease happens this is an indication to continue our treatment with perseverance.

3. All the remedies to be successful must be applied with perseverance, and produce some perceptible modification over the nutritive functions. The use of mercury, iodine, and eccoprotic, drastic, diuretic, and other remedies, and the treatment by starvation also, must show their influence in some degree, otherwise no local result is to be expected. In the absence of any manifest result, the

treatment must not be carried so far as to cause permanent injuries to the patient. When the disease remains stationary for a long time, and the general health remains comparatively undisturbed, it is advisable to adopt no treatment at all, or in certain constitutions an indifferent one.

4. The more urgent intercurring symptoms are to be removed, if possible. To these belong the occurrence of peritonitis or inflammations of the cysts themselves, obstinate constipation, various urinary complaints, amenorrhœa, symptoms of wedging, great œdema, ascites, varicose veins with their consequences, some attacks of pain, agrypnia, sickness, and lastly the symptoms which proceed from complications of this disease with pregnancy; also those observed after ruptures and formation of fistulæ of the cysts. Of these symptoms there are certainly several, even when they first set in, in the course of the disease so intimately related to the development of the local disease, that they do not yield until the removal of the latter; while some of them may become so urgent that they necessitate operative interference, and first of all the evacuation of the cysts; for instance, the symptoms of wedging of the pelvic structures may become so severe that we find ourselves obliged to have recourse to tapping. Ascites and anasarca also often do not yield while the tumour continues; but on the other hand there are also cases in which we succeed in causing the dropsy to retrograde by symptomatic treatment. The same obtains respecting amenorrhœa,

which is sometimes a necessary symptom of the enlargement of the cyst, at others an accidental symptom, which in some cases reacts injuriously on the ovarian disease, and then also requires therapeutical attention. The complication with pregnancy is in many cases without remarkable bad effects; while in other cases it causes abortion, peritonitis, and very distressing symptoms of traction of the pelvic structures; finally, during labour, various difficulties which must be removed by the assistance of art. The frequent ruptures which take place, and the spontaneous perforation of the cysts, in general only require the combating of the symptoms accompanying them.

The extensive series of symptoms we have mentioned are besides often increased by the whole train of hysterical symptoms, and then the symptomatic treatment claims the whole attention and patience of the physician. But in this case no rule, generally applicable, can be given, and each case requires individual consideration.

5. When the disease goes on steadily increasing and the internal treatment remains without result and more urgent symptoms set in, it then becomes a matter for consideration whether we should proceed with operative interference or not.

Our next observation must therefore be directed to the surgical treatment, which is also symptomatic and radical.

§ XLIII.

THE SURGICAL TREATMENT

Is either palliative, symptomatic, or radical. The former is accomplished by simple evacuation of the cyst; the latter, 1, sometimes by that operation also; 2, by continually keeping open the puncture; 3, by injection into the opened cyst; 4, by incision of the cyst; 5, by partial excision; or, 6, by total or partial extirpation.

We will turn our attention first to the operation most frequently employed, viz., tapping in the two modes mentioned above; directing our attention first of all to the radical treatment.

For the evacuation of simple ovarian cysts, and the radical cure aimed at by that operation, several modes of procedure are employed, viz.: The contents of the cyst may be evacuated by puncturing either the abdominal walls or the vagina. Of these two ways *the opening through the vaginal wall*, where it is practicable, is in every way the most suitable for the *radical* cure. It is consequently necessary to place *our method of radical treatment*, which we published several years ago (see *Prager Virteljahrschrift;* b. x, s. 87), before the description of other methods, and to add the results of our subsequent experience.

Our method is generally applicable to moderately large simple cysts, which do not exceed the size of a large pregnant

uterus, and can be reached from the vagina. Smaller cysts are obviously still more suitable to it as soon as they can be recognised.

In order to answer the purpose intended by us, the cyst is opened through the wall of the vagina to such an extent that a finger can be easily introduced through the wound. After evacuation has been effected, a strong, long uterine tube with a bulbous extremity is introduced into the cyst, and fastened in front of the genital organs, and left for several weeks until diminution of the cavity of the cyst takes place, which process is accelerated by the daily injection of warm water.

It is easily understood that the operation is intended to prevent the reaccumulation of the contents by keeping the cyst open, and to produce contraction and obliteration of the cavity by the induction of an inflammatory process. This plan, even in the first attempt, succeeded most satisfactorily, in the case of a cyst larger than an adult's head.

The further procedure in this operation was generally as follows: First of all, we made an explorative puncture, in order to be certain that we had to do with a simple cyst. After it had refilled—which took place in a few days, or sometimes not for some weeks—the patient, after proper evacuation of the bladder and rectum, was placed in the position for lithotomy. An assistant undertook the compression of the cyst in the lower abdominal region; a second provided for the reception of the fluid and the fixing

of the legs. By means of the uterine sound we ascertained the position of the uterus, which was invariably pushed forwards, and by exploration with the finger we determined the condition of the rectum. Between these lay the cyst to be opened, pressing down the vaginal floor more or less deeply. The operator now placed the index finger of the right hand on that portion of the vaginal wall where fluctuation was most distinct, or where the cyst projected most. In order to make this easier, the assistant made strong pressure upon the cyst from the abdominal region. In opening the cyst we used a long curved trocar, which was pressed with the point drawn back on the fluctuating place, and then plunged into the tumour, in the direction of the axis of the pelvis, till the canula penetrated about half an inch into the cavity of the cyst. The resistance which the tumour offered was often not inconsiderable, because its thickest part generally lay lowermost. When the trocar was withdrawn and the canula left, the discharge of the fluid demonstrated the immediate success of the operation. Without evacuating much, we now proceeded to the second stage of the operation; that is, to the widening of the orifice. With this intention we introduced a long metal director, expressly made for the purpose, which corresponded exactly to the curve of the canula and without a handle, through the canula as deep into the cyst as it would go. We then withdrew the canula, and guided a long, small, probe-pointed bistoury, furnished with a strong handle, along the director

into the cavity. With this we enlarged the wound in the corresponding direction, sufficient to allow the fore-finger to pass, which was then introduced as deep as possible into the collapsing sac, in order to ascertain the condition of the internal surface and the length of the canal formed by the wound. After withdrawing the finger we introduced, as we have already stated, a long suitably-curved uterine tube through the wound, deep into the cavity, with its other end fastened with a T bandage in front of the genitals.

Immediately after the operation the patients, when laid at rest, generally felt tolerably well; but on the second or third day symptoms of inflammation of the cyst with a general and commonly severe reaction set in. During from ten to twenty days the local irritation was manifested by the discharge of ichorous fluid and by great pain in the whole surrounding parts. In favourable cases, these symptoms gradually gave place to a purulent discharge, which disappeared after a course of from five to seven weeks, and then shrivelling and perfect obliteration of the cavity took place. As long as any secretion was produced in the cavity, and especially at the time of the discharge of the ichorous fluid, we took care to guard against any great reaccumulation of the contents, by the injection of lukewarm water through the uterine tube twice a day. The injections could not be given forcibly, otherwise they occasioned severe pain. Moreover, it was necessary in some cases to use copious vaginal injections, because the corroding dis-

charges irritated the vaginal mucous membrane so much that sometimes a very painful croupous inflammation occurred. According to our experience it is not advisable to remove the uterine tube until considerable decrease of the disease has taken place, because its reintroduction is very difficult and painful: however, it may so happen that the wound below the bulbous extremity of the tube becomes so narrow that great difficulty is experienced in withdrawing it. During the greatest part of the treatment the patients were continually kept in bed, and placed under a careful dietetic regimen.

We endeavoured, in one case, to replace this somewhat complicated and not always easily practicable treatment, by a more simple method; but we were not satisfied with the result. It appeared to us much simpler in those cases where the fluctuating spot is easily reached, to undertake the opening and widening of the wound with a common strong-pointed bistoury. This treatment has, however, the disadvantage that it is always difficult to operate within the vagina with a sharp pointed instrument, with the exception of those cases in which the cyst descends deep into the pelvis and is tensely stretched. When the incision is completed, the fluid, which is mixed with blood, and runs down the walls of the vagina, is not seen in the same way as after puncture by a trocar: besides, in enlarging the wound, the flaccid vaginal floor is torn by the knife without being cut through, so that the widening is generally unsatisfactory, while in those cases

where the director has been introduced, the one edge of the wound is fixed by it, and the extension can be made more easily with the knife in the opposite direction.*

The advantages which this treatment presents are self-evident. As a general rule, by tapping in this way a perfect evacuation of the cyst is more certain to be effected and maintained, and thus a dangerous collection of ichorous fluid prevented and atrophy of the cavity essentially encouraged. The displacement of the place of puncture is also not so readily produced in vaginal as in abdominal tapping; and the shrivelled ovary, after the completion of the case, is found nearly in its common position, whence subsequent symptoms of dislocation and pathological adhesions of this organ are avoided. We had an opportunity, in the case of a patient on whom we operated seven years ago, to convince ourselves that a continued perfect state of health

* *Schnetter*, of New York, has recently made us acquainted with a mode of treatment which, in consequence of its simplicity, deserves the preference to that recommended by *Kiwisch*. According to *Schnetter's* advice, a curved trocar is introduced through the vagina with the point drawn back, and plunged into the tumour felt through the vagina. The stilet is then withdrawn, and a knife introduced through the canula, which is an inch and a half long in the blade, and fixed upon a handle constructed according to the curve and width of the canula. The blade of the knife projects beyond the canula. The knife and the canula are now withdrawn from the wound at the same time, and the latter is now dilated to such a size by pressure on the knife that a finger can be conveniently introduced. An elastic tube, about as thick as a finger, is then inserted and bound without the genitals.—(*Würzburger Verhandlungen*, band v, pag. 105.) We have now operated twice according to *Schnetter's* method, and consequently can recommend it from our own experience. But in order to prevent the turning of the knife in the canula, which easily takes place and makes the incision difficult, we have had the canula made triangular, and the handle of the knife also receives a triangular form. Lastly, it is convenient to have the blade of the knife made as thick as possible, to prevent any bending of it in cutting through the thick resisting tissues.—S.

is possible. But, on the contrary, it is to be observed of this method of operation, that it is only practicable in those cases where the cyst can be distinctly felt through the vagina, that it is particularly difficult when the vagina is narrow, and then must be performed with very great care, and even, under additional unfavourable circumstances, as we experienced in one case, it may also have a fatal result. Under such circumstances the desired cure cannot be offered to some patients by this treatment, even although the cyst is simple; the question therefore arises, what treatment we have to propose in such cases.

Before we pass to the consideration of other methods of treatment, we must observe that vaginal tapping was partly proposed, partly employed, in several quarters, sometimes with the design of effecting a radical cure, sometimes as a palliative treatment. The first person who performed it must have been Callisen, in 1775; but on the whole it remained little employed, and did not till recent times find numerous defenders. We must look upon the proposition of Récamier as quite obsolete, who advises us to introduce a long bent trocar from the abdomen into the cyst, and through it into the vaginal floor.

The natural evacuation through the floor of the vagina, which was not seldom observed, and the very considerable fluctuation of the cyst in this region, induced the physicians to operate in the way suggested. It was not only proposed for the opening of ovarian cysts, but also in pelvic abscesses. (Hippolit Bourdon, physician at the Hôtel Dieu, reports

twenty cases in which fluctuating pelvic tumours were opened thus.—*Rev. Méd.*, 1841, July and August.) In the majority of instances they were satisfied with simple tapping. The results even of this were not always unsatisfactory, since many cases are recorded in which the reaccumulation took place very gradually or not at all. In some cases, by leaving a canula, they sought to maintain a steady discharge; but they were not very fortunate, partly from the choice of cases, partly because the canula fell out and could not be reintroduced.—(See *Cazeaux*, upon the Surgical Treatment of Ovarian Dropsy in the *Annal de Chir. Franç. et Etrangère*, Oct., 1844.) In some instances a continued trickling of the contents followed by recovery is said to have taken place. Permanent discharges, followed by a favourable termination, have been observed after natural perforation.

Hence it results that, in the most favourable cases, the simple puncture through the vaginal wall may lead to a radical cure; and we have sometimes observed such favourable results that, whenever practicable, we unconditionally prefer it to puncture through the abdomen. As to its practicability, it is not absolutely necessary that the cyst should form a protuberance if it can be reached in the exploration through the vaginal wall. It is certainly not to be denied that, when the cysts are situated high up, the vaginal puncture is attended with many more and greater difficulties than abdominal tapping; and that without great care dangerous lesions of the neighbouring

structures may easily be produced: it therefore appears advisable that such difficult cases should be undertaken only by an experienced operator.

In conclusion, the question still remains whether our method of radical treatment can be applied to very great and compound cysts, when they can be reached through the vagina. In our opinion it is only of use in moderately large, simple cysts; because, in very large cysts, the extensive decomposition must be very exhausting to the system, and compound cysts do not allow of a proper shrivelling of the opened sac, as we experienced in a fatal case in which two cysts were in juxta-position, and only one could be punctured.

[The records of the treatment of cases of unilocular ovarian cysts by tapping per vaginam, are very limited in number, and the author furnishes no precise data to indicate the results. It is surprising that an operation never hitherto immediately fatal, and so frequently successful, has not been more often practised, especially conjoined with the injection of a solution of iodine—a mode of treatment which has rarely been attempted. But few facts, therefore, can be obtained to show statistically the results of tapping per vaginam.

Dr. Scanzoni, the successor of the author at Wurzburg, states (*op. cit.*, p. 409) that he has operated in this way fourteen times. Eight of the cases were completely cured; in two the cysts refilled after the expiration of a few weeks; three had not come again under his notice; and one died of typhoid fever two months after the operation. In three of the patients intense inflammatory symptoms ensued, but they recovered; three of the patients were living five, three, and two years respectively after the operation, and evinced no symptoms of a relapse of the disease, and none were complicated by any serious accidents. If the cyst refills, Dr. S. thinks that is no obstacle to the repetition of the operation.

Dr. West (*op. cit.*, p. 149) has tapped per vaginam, in ovarian disease, three times, and considers that the method is attended by more hazard than may be inferred from the writings of either Klwisch or Scanzoni. Two of his patients recovered after the manifestation of violent inflammatory symptoms, and the third died from causes not necessarily connected with the operation. Dr. W. alleges three reasons for not operating when the cyst is of large size: first, because the bladder is sometimes prevented from rising out of the pelvic cavities and is spread out laterally, and thus very likely to be injured in the performance of the operation; secondly, the solid matter generally found near the pedicle usually prevents the

tapping from being efficient: thirdly, the greater vascularity of the pedicle presents an unusual liability to hæmorrhage when a puncture is made in this region. The first suggestion is an important one; but no doubt this particular disposition of the bladder could be easily ascertained, previously to tapping, by means of a sound, or by noting what effects the introduction of a catheter has in reducing the vaginal swelling. With respect to the third, some difference of opinion exists on this point. M. Huguier, at the discussion of the French Academy on the treatment of ovarian cysts, stated that he does not fear the lesion of important vessels in this region. He prefers tapping ovarian cysts per vaginam, on account of being able to make the opening at the most depending portion of the cyst, thus obviating the necessity of ascertaining the existence of adhesions before tapping through the abdominal parietes. In cases of doubt he advises, also, exploratory punctures per vaginam. Notwithstanding the fears of Dr. West, the success of this method of operating, according to his results and those of Kiwisch and Scanzoni, is very great; and, as will be found hereafter, by no other treatment has similar results been obtained. On these grounds we recommend strongly an extended application of tapping per vaginam, conjoined with irritant and subsequent emollient injections.—J. C.]

§ XLIV.

TAPPING THROUGH THE ABDOMINAL PARIETES

Has been employed much more frequently than the vaginal puncture we have described. In order to avoid repetition and to describe the subject more completely, we shall extend the subsequent observations upon tapping ovarian cysts, and consider it so far as it is applicable to simple and compound cysts, and also as it regards its radical result.

For this exposition of suitable indications, and for the proper performance of this operation, it is necessary to keep the following facts in view: In tapping through the vagina, as well as in that through the abdominal

parietes, the external integuments (in the one case the vaginal wall, in the other the abdominal parietes), the peritoneum in two places, and the cyst wall, are perforated. As to the wounding of the last, we have to observe that in tapping per vaginam, we not unfrequently puncture the thickest part of it; while in the operation through the abdomen we can much more easily choose that part where the cyst wall is thinnest. In this respect abdominal tapping has some advantages over that through the vagina, especially as a palliative measure.

The lesions occasioned by tapping in the structure we have named are generally attended by no dangerous consequences, and even the reaction is usually so inconsiderable that it is seldom followed by adhesions between the wounds of the abdomen and those of the cyst. Yet there are numerous exceptions, and we see more or less extensive peritonitis or internal cystic inflammations developed from the punctured places which, not seldom, attain a fatal extent. More frequently this happens after rapidly-repeated tappings, in which the irritable condition, which the previous wounding occasioned, has not disappeared at the following. A much rarer phænomenon occurs when a large vessel in the abdominal parietes or in the wall of the cyst is wounded in tapping, and a fatal hæmorrhage is produced. In general, the former accident may be prevented by a careful selection of the place of puncture: on the other hand, considerable hæmorrhage after the wounding of vascular cysts, cannot, for reasons easily understood,

be foreseen. In that case it may happen that, after evacuation has been accomplished, the cyst gradually fills with blood, and the internal hæmorrhage becomes dangerous to life. Thus *Chomel* saw rapid bleeding follow in two cases.—(*Gazette des Hôpitaux*, 1845, No. 44). Other physicians have also reported some cases of this kind, and we too, in one instance, saw so much blood collect in the cyst after each puncture that a dangerous anæmia set in, which prevented us from proceeding with the operation. So far as we know, these hæmorrhages were observed in compound cysts only.

When we consider the further consequences of the wounding of the cyst, and those of the evacuation aimed at, the following facts are to be taken into consideration:

In favourable, but at the same time very rare, cases, the evacuation is attended by a continued shrivelling and very considerable diminution of the cyst, so that the individuals are considered to be as good as cured. This shrivelling may be occasioned partly by the occurrence of an inflammatory metamorphosis of the cyst wall, or by a suppression of the secretion, or lastly in consequence of the places of puncture remaining open for a long time, and of continued trickling of the contents into the peritoneal cavity with rapid absorption taking place when there. As to the first process, it is to be observed that it often happens that the cyst fills somewhat again under the inflammatory attacks, and with a plastic exudation which gradually lessens as the metamorphosis of the wall proceeds;

and at last it is, with its enclosing membrane, reduced to a much smaller volume, or even the greater part is absorbed. It may also be assumed that in some cases the inflammation is followed by some degree of obliteration of the vessels of the cyst wall, by which the activity of secretion is suppressed, and in this manner a decrease of the disease is effected. We saw this favourable result set in after the second puncture of a colossal ovarian cystoid which Professor *Pitha* performed in such a manner that the tumour which had previously contained more than sixty pounds of fluid became shrivelled to the size of a child's head, and for six years caused the patient no inconvenience at all, who had formerly been reduced to the last extremity, but now she is very well. Upon other similar observations made by us we cannot speak, because the patients, who have reason to hope for a similar result, have not remained under our observation during a corresponding number of years.*

Respecting the second process, it may be mentioned that it is frequently observed in an imperfect state, because the regeneration of the contents is often delayed for a long time; but in all cases it involves the possibility of a relapse.

Lastly, as to the third process, we have found that in some cases the punctured places remain open very

* We have in our practice up to this time observed three cases of permanent cure of ovarian cysts after simple tapping through the abdomen. One patient has been free from her disease five and a half, the second three, and the third more than two years.—S.

long, and thus a constant discharge takes place into the abdominal cavity, which generally produces no dangerous symptoms when the contents of the cyst are not of an irritating character, and, as we have stated, the fluid is quickly absorbed: indeed, we have several times observed that some days after the performance of tapping, in consequence of a great collection of the discharge in the peritoneal cavity, the abdominal wound opened, and a spontaneous external discharge took place. In general, apprehensions have been excited in tapping in consequence of the discharge of the contents of the cyst into the abdominal cavity, and the fact was quite overlooked that, in free cysts, after the removal of the canula, this discharge generally takes place; for the punctured places in the abdominal and cyst walls remain in anything but apposition. However slight the symptoms may be after such a discharge, which is mostly serous, they may likewise be very severe when the contents are irritating; and from this cause a simple puncture, by inducing peritonitis, may have a fatal result.

These imperfect or perfect cases which we have just detailed, have, unfortunately, furnished only slight advantages for practice, partly on account of their great rarity, and partly because they cannot be foreseen. Hitherto, at least, it has been impossible for us to acquire any data for prognosis from foreign contributions; and our own experience does not produce any, because we have hitherto observed these processes of cure only in a few cases. As to foreign observations, it may still be remarked

that many of them, in several respects, are anything but satisfactory, and in particular they are not sufficiently followed out as to the subsequent relapses which occurred. But if we must exclude a great number of contributed observations of radical cures from the number of undoubted recoveries, still there remains several in which we cannot help receiving the occurrence of the said cure as being proved. Our own experience, too, leaves us no doubt about the matter; but, as we have already stated, the especial conditions for the introduction of this favourable result still remains unknown to us.

It is further to be observed that these permanent or stationary diminutions were seldom perceived after the first tapping; more frequently after repeated punctures.

The most common result of evacuations is the *accumulation of the contents*, and in less or inconsiderably altered quality. The latter depends partly on the primary nature of the contents, partly upon the condition of the cell wall which existed previous to tapping or was induced by it. These fluids, which were rich in organic matters, generally became serous; although the contrary often happens after frequently repeated tappings, and the contents become especially viscid and rich in albumen. Pure pus, however, is seldom regenerated, and ichorous fluid is commonly secreted; a fluid mixed with blood may be quite clear next time, and, on the contrary, a clear fluid may become bloody. In other cases different inflammatory products are added; secondary cysts also may subsequently discharge

their fluid, or in the meantime softening of a cancerous cell wall takes place, and the previously clear contents then contain decomposed cancerous masses, &c.

In general it may be assumed that the simpler the form of disease the more serous the fluid, and so much the more may its regeneration be expected to be in similar quality; when inflammation or hæmorrhage is not produced by the operation.

The regeneration of fluid occurs at very different periods, for we have often seen from twenty to forty pounds of it renewed in the course of from ten to thirty days; in other cases the same quantity has not collected under several months, and in some patients not till after the lapse of a year, and even beyond that time. Respecting this symptom it has always appeared to us impossible to arrive at a prognosis with any certainty; but neither the size, nor the age of the cyst, nor the quality of the contents, nor the constitution of the individual, permits us to predict how quickly the regeneration may take place. It is only in those cases in which several tappings have previously been made that the time of the regeneration following them affords a clue for the prognosis, although even in the repeated reaccumulation of the contents considerable variations are observed.

The other immediate and after consequences of evacuation are also very different. In most cases the evacuation, even when it has been very considerable, is well borne; the patients feel relieved by the lessening of the burthen,

especially the tension and dyspnœa; yet there are some exceptions to these cases, for in very broken down, anæmic persons, fainting fits, cold sweats, and great continued weakness occur. It also happens when there are considerable adhesions of great cysts in the epigastric region, that after violent compression of the abdomen during the evacuation, exquisite tenderness in the parts which were stretched, nausea or vomiting sets in immediately or shortly after the operation. In some instances a severe burning pain in the abdomen, and sickness also accompanied the discharge, which often takes place into the abdominal cavity. All these symptoms, however, may soon subside, and in the majority of cases tapping does not generally prove fatal in its immediate consequences, except in cases when, as we have already stated, exhausting hæmorrhage comes on.

The most dangerous part in the evacuation is the subsequent poverty of blood, and likewise the frequent inflammation of the cyst and peritoneum which comes on. Exhaustion sets in sooner in proportion as the evacuated fluid is quantitatively great, and qualitatively rich in organic matters, as the individual is poor-blooded and the progress of the regeneration is quicker; yet it is to be observed in general that it is often astonishing in how short a time extensive deposits take place, without there being any marked symptoms of depression of the powers, while the great number of evacuations which are borne by some individuals is remarkable. Thus instances are known

which in less time than a year one hundred tappings have been undergone and in which a total quantity of several thousand pounds of fluid were evacuated; indeed *Dr. Bamberger* recently reports a case in which two hundred and fifty-three punctures were made within eight years. (*Deutsche Klinik*, No. 12.)

These instances are certainly great rarities and cannot serve for a general standard; on the other hand, the cases in which from six to twelve evacuations of considerable quantities were performed are the more common. Besides these there is a considerable number which in their course proved fatal before the fourth, and immediately after the first, tapping. Respecting the last cases, however, it is to be remarked that they proved fatal, not by simple regeneration of the primitive contents, but in consequence of inflammation of the cyst, or by the recurrence of peritonitis.

Southam gives a relative statistical report of twenty patients in whom paracentesis was performed, according to which four patients died at an early period after the operation from inflammation, three in the course of a month, and fourteen within nine months.—(*London Medical Gazette*, November 24th, 1843.) Such a statement, limited to so small a number of cases, cannot be a standard, and we have therefore endeavoured to frame such a statistical review on a greater scale, which will follow hereafter. As it results from what has been previously said, the dangers of tapping depend very much on the kind of the tumour,

its contents and size, and the constitution of the patient, &c. A general review, without taking these special conditions into consideration, is only of a conditional practical value. But to construct a corresponding statistical table is very difficult, and would necessitate a great number of secondary divisions; and even then, in many cases, it would still remain unknown what was the special cause of the mortality. Thus we have treated persons who recovered from the first operation, and who when operated on a second time, under apparently similar conditions, lost their lives.

With these insurmountable difficulties in the construction of a suitable statistical review of the results of paracentesis, we must confine ourselves to a collective consideration of the data furnished by the latter without any reference to the form of disease, or the individuality, &c. The practical rules deduced therefrom, although, for reasons stated, they show only a conditional applicability, still appear to us of great importance.

With this view we have collected, as well from our own as from our colleagues, and partly from literature, the relative results of sixty-four cases, of which the minority only, from easily understood reasons, related to simple cysts, on which account the following data of this collection have reference to all the diseases of the ovaries which admit of tapping. In these sixty-four cases, the numerical relations are the following:

After the first tapping, nine patients died during the

first month; ten later, among which some lingered a year, or even upwards. After the second puncture six died; after the third to the sixth, fifteen; after the seventh to the twelfth, ten; after still more frequent evacuations, seven. In one case, after the course of several years, the paracentesis was followed by no relapse; in three cases the disease, after several repeated tappings, did not attain its previous intensity for a long time, and the patients, feeling better, withdrew from observation; and in three other cases, where the operation was also performed several times, death resulted from intercurrent diseases, standing in no apparent relation to the ovary.

As to the duration of life after the performance of one or several tappings, the above sixty-four cases gave the following results: Nine patients died at an early period after the first puncture; before the lapse of half a year, eight; before the expiration of one year, eleven; before the end of two years, fourteen; during the third year, nine; and six lived from four to seven or more years. The other seven are included in those previously mentioned as cured, improved, and those who died from accidental causes.

It must not remain unobserved, respecting this numerical review, that we have purposely not availed ourselves of those cases in literature which were published on account of their extraordinary favourable course, because the majority of them did not appear to us reliable, and we believe that we must take into consideration only the general result.

After we had completed the present statistical notice, we lately received the Prize Essay of T. S. Lee (*On Tumours of the Uterus and the other Female Sexual Organs.* Translated from the English. Berlin, 1848. P. 240.), containing notices of forty-six patients who had been tapped, from which the following results are obtained:

Of these forty-six, thirty-seven died, two recovered, and of the other seven it was said that they were still living, some of them in an improved condition. Of the thirty-seven fatal cases, three sunk in the course of the first twenty-four hours after the first tapping, six after a few days, six during the first month, twelve in the first year, five in the second year, two in the third, one in the sixth, one in the eighth, and one in the fifteenth year.

The number of tappings in thirty-two cases in which it was known, was the following: in eighteen cases it was performed once, in six cases twice to five times, in four cases seven to twenty, in four cases from twenty-three to seventy-eight times.

However deficient, as we have already stated, the result of these collections are, still it can be gathered from them that the data of the so commonly employed paracentesis are unsatisfactory and uncertain as it regards the radical cure or essential amelioration intended; and the question still arises, whether any longer duration of life and relief of urgent symptoms are attained by this operation, since this was the immediate design which was aimed at by the majority of practitioners in resorting to the operation of tapping.

If we make use of the three reviews by *Southam*, *Lee*, and ourselves, already given, to form a conclusion, it results that of the collective number of one hundred and thirty tapped, twenty-two died in the course of a few hours or days, which is about seventeen per cent. It is shown from the progress of the disease that death, in these cases, was nearly always caused by the tapping alone, and this unfavourable termination did not take place only under conditions very unfavourable for the operation; but, contrary to expectation, it generally happened in cases which were apparently quite suitable. In the twenty-five cases which proved fatal before the termination of half a year, we must also ascribe the unfavourable issue chiefly to the consequences of tapping; and, in general, we shall not far err by assuming that the hundred and thirty patients mentioned had their life apparently shortened by that operation. In these, therefore, the design of prolonging the duration of life was not attained. Even in many cases in which there was a longer duration of life after tapping, the fact is questionable, because the operation was performed, not unfrequently, when the development of the disease was slight, and in which it is still doubtful whether in the undisturbed course of the disease the life of the patient might not have remained unmenaced for a greater number of years. Accordingly, we are obliged to assume that the intention of conferring a longer duration of life by paracentesis has not been attained in the majority of patients; but that in a considerable number of cases the consequence of it

was an apparent shortening of life; and that, even under the most favourable conditions, its success is very uncertain; and that the issue cannot be predicted. On the other hand, if we would take into consideration the radical cures and decided ameliorations effected by paracentesis, their small number in comparison with the great majority of unfavourable terminations would certainly fall much too light into the scale.

Respecting the second intention mentioned, the removal of dangerous attacks and distressing symptoms of disease, it cannot be doubted that, in a great number of cases, rapid relief to the patient was effected, which depended upon the removal of a more or less considerable obstacle to free motion, respiration, and partly to the abdominal functions; while at the same time the distressing feeling of abdominal tension and many other painful sensations were removed. This rapid success has therefore induced the practitioner, as well as the patient, to make a fearless use of this generally painless remedy; and it often happens that patients who were tapped with relief even urgently importune the practitioner for a repetition of the operation, which he repeats so much the more readily as the hopelessness of other remedies leaves him no alternative.

This relief, however, soon comes to an end in all those cases where the regeneration of the contents takes place rapidly, and in which it commonly happens that the symptoms connected with it are much more distressing than they were before the operation. Among these symp-

toms are feverish excitement, great faintness, loss of appetite, constipation, and dysuria; and the common result then is, that such patients, for the relief of their subsequently more complicated disease, urgently desire consecutive tappings in shorter and shorter intervals, and before the perfect filling of the cyst. In those instances, on the other hand, in which the regeneration takes place slowly, the condition is much more satisfactory; indeed almost perfect health may continue a long time, even, within our own knowledge, for above a year. But it is to be lamented that these cases are very rare, and we cannot predict this result with any probability, nor that after the first tapping, contrary to our expectation, a whole train of unbearable suffering may not be introduced.

Lastly, in cases where peritonitis, hæmorrhages, and inflammations of cysts have been caused by tapping, the relief is naturally of short duration; and some patients suffer so much pain and weakness after tapping, that even a momentary amelioration is not effected.

But since there are cases in which the symptoms of pulmonary compression, tension of the abdomen, and cyst walls are so great that, as we have observed, the severe pain causes continued agrypnia, the patients vomit their food and drink, and suffer from distressing dyspnœa, so that life becomes burthensome, and evacuation of the cyst may become necessary by a kind of *indicatio vitalis*, and all apprehension as to a fatal result must be disregarded. There is also a series of less dangerous and more

permanent symptoms, so that the patients desire a remedy at any price. Thus some are unremittingly confined to bed by the weight of the tumour, by the presence of œdema, by neuralgic symptoms, or continually pained by erysipelatous inflammations of the tense abdominal wall, by dysuria, and constipation. Among the working classes it sometimes happens that the patients, in consequence of an ovarian tumour, are incapable of working, and are doomed to misery. Under such conditions it is sometimes more humane if even an uncertain attempt is risked to ameliorate the condition of the patient; and this appears so much the more justifiable the more certainly the disease progresses, the simpler the form of the cyst, and the more admissible a subsequent operation is.*

* The preceding description of the dangers incurred by leaving a canula in the cyst appears to us somewhat exaggerated. Of nine patients, in whom we applied this method of treatment, not even a single threatening symptom presented itself; and in the present year, in our gynekological clinique, we effected a permanent cure of a simple cyst.—S.

[The obliteration of ovarian cysts by abdominal tapping is only to be expected in those that are unilocular and of small size, and then only when the contents can be completely evacuated. In cysts of this character adhesions are generally absent, the peritoneum is usually in a normal condition, and in consequence the risk of peritonitis subsequent to the operation is much increased; and more so if the ovarian disease is associated with granular degeneration of the kidney. The cases are but few, therefore, where the radical cure of an ovarian cyst by this means can be realised, and with this object in view ought never to be undertaken.

In palliative abdominal tapping, the operation should be delayed as long as it is compatible with the safety of the patient. When the cyst, however, has completely distended the abdomen, and produces digestive disturbances or derangement in the organs of the circulation and respiration, tapping becomes urgently necessary if no other treatment is indicated. The operation affords greater relief in simple cysts, as they can be more efficiently evacuated; but the sufferings of the patient may demand its performance even in multiple or multilocular tumours, and is more successful when the separate cysts can be evacuated in succession. In pregnancy, complicated with ovarian cystoid disease, when the symptoms become so distressing that abortion is imminent, and it is desirable that the child should be born at the

full term, tapping may be tried with a view to prevent its occurrence. As a general rule, the operation should not be delayed so long that the physical powers of the patient become seriously compromised, as the patient might die from shock or exhaustion after the operation.

In tapping ovarian cysts, the puncture should be made at that place where fluctuation is most marked, and, when practicable, in the median line, on account of the danger of injuring the larger vessels of the abdominal parietes. In small-sized cysts, however, fluctuation is not usually very distinct; they should, therefore, be always punctured in the median line, but tolerably near to the pubes, particular care being taken to avoid injuring the uterus and bladder. Occasionally the intestines are found in front of the tumour. When there is reason to suspect this condition, an exploratory incision should be made prior to inserting the trocar, in order to ascertain that this complication does not exist. The danger of cyst inflammation, from the entrance of air during tapping, is not so great as at one time was imagined, other causes being equally efficient in its production. According to Dr. West, it may result from pyæmia owing to a diseased state of the blood.

In performing abdominal tapping, the patient should be placed on her side in bed, the head and shoulders raised, and the face inclined somewhat downwards. The catheter should be previously used to empty the bladder. A bandage put round the abdomen, with a hole cut in it for the trocar to pass through, is to be preferred to compression with the hands of assistants. Thompson's trocar and canula is a very useful instrument wherewith to evacuate ovarian cysts, and should be preferred to the ordinary large straight trocar. If any solid matters plug up the canula, they should be drawn forwards if possible with a hooked piece of wire. In withdrawing the canula the edges of the wound should be compressed, and held together until the usual dressings are applied.

If symptoms of cyst hæmorrhage become manifest after the operation is completed, cold, both externally and per rectum, may be tried; but it generally happens that unless some fortuitous circumstance occurs to arrest the hæmorrhage there is but little hope for the patient. When symptoms of cyst inflammation supervene, leeches should be applied to the abdomen, and when the bleeding has ceased, flannels wrung out of hot water should also be applied, on which an embrocation composed of extract of belladona, tinct. op., and ol. terebinth, &c. has been spread. Opiate and terebinthinate remedies are useful adjuncts internally, and if the sickness and thirst are distressing, ice may be sucked freely with advantage. The patient should be well nourished, as the type of this affection is generally of an asthenic character. If shivering and other symptoms of suppuration present themselves, and the cyst is obviously enlarged, it will be necessary to evacuate the purulent contents, when quinine should be administered, and wine with a generous diet allowed.—J. C.]

§ XLV.

The frequently occurring regeneration of the contents of ovarian cysts, soon causes the practitioner to reflect in what what way it can be checked. The attainment of this object has been attempted in different ways, and among these—1, *by keeping open the cysts by leaving in them trocar tubes;* 2, *by irritation of the cyst walls by injection;* 3, *by incision of the cysts and*, 4, *by the combination of therapeutical remedies with tapping;* 5, *by excision of a part of the exposed cyst, followed by the closure of the opened abdominal cavity.*

1. Just as we (see § XLIII) often kept the cyst open, after the performance of vaginal tapping, by inserting strong tubes, and thus obtained a perfect cure in a considerable extent of the disease, so endeavours had been made before that to proceed in a similar manner after abdominal tapping. The most recent successful result was obtained in this way by *Ollenroth* (see *Die Heilbarkeit der Eierstockwassersucht, von F. Ollenroth:* Berlin, 1843), who, by leaving a canula in the punctured cyst and by its gradual evacuation, obtained a very excellent cure in the case of his sister, who was a very great sufferer. Notwithstanding this success, we must express our dissent from this treatment, and experience has also decided against it. As in this method it is very difficult to evacuate properly the

ichorous fluid formed, under the influence of the air, which obtains an entrance, there is always a threatening danger of severe inflammatory irritation and extensive destruction of the cyst walls which contain the ichorous fluid, and of the neighbouring structures; and there is also a danger of blood-poisoning. The proper shrivelling of the cyst is likewise long retarded, because it forms adhesions with the anterior abdominal wall. Hence the restoration of the ovary to its normal situation is either impossible, or effected with much difficulty, whereby the powers of the patient are easily destroyed. In the most favourable cases gangrene attacks the anterior walls of the cyst and abdomen, and a wide-gaping opening is formed for the discharge. Still many sacrifices must always be made before we can succeed in obtaining a result similar to the foregoing.*

2. The attempts to produce an inflammation and subsequent shrivelling of the sac *by injections* have hitherto yielded very unfavourable results. We once saw it applied

* Mr. Alexander Anderson, of London, has kindly communicated to me the particulars of two cases, in which he adopted the plan of treating ovarian cystoid disease by leaving a canula in the cyst after tapping, and which was kept plugged after the contents of the cyst had been evacuated. The result was that in one case the patient recovered completely after much suffering. She lived eleven years after the operation, when she died from an attack of epidemic cholera. The other patient died a few weeks subsequent to the tapping, from constant vomiting. After death the cyst was found contracted, empty, of the shape of a long silk purse, and adherent at its upper part to the omentum. No evidence of peritonitis having existed was discovered. Mr. Anderson does not appear to be equally sanguine with Dr. Scanzoni as to the merits of the operation, for he adds, "On a review of these cases there is little reason to recommend a repetition." Other cases are recorded besides those mentioned, where this method has been employed, and although some cures have been obtained, the success has not been such to recommend it as an operation for general adoption.—J. C.

with a rapidly fatal result, and the reports of other physicians appear to be equally unfavourable. The reaction is never under the power of the practitioner, and the whole treatment should be subservient as auxiliary means to the previously mentioned method; but in this case it is indispensable, because the reaction is generally too severe without injections. The injections of warm water recommended by us after vaginal tapping, as has been already stated, have only the design of removing collections of putrid fluid, and their action, when applied in the manner described, is merely temporary.*

* Injections of iodide of potassium and tincture of iodine, to cause a radical cure of ovarian cysts, have recently found a very zealous defender in *Boinet* (*Bull. de Therap.*: Aout). He recommends the following treatment: Tapping is performed with a strong trocar. The tube is left in during the evacuation of the fluid, and then a thin elastic catheter, furnished with two lateral openings, is introduced through that into the cavity of the cyst, which after the removal of the trocar tube must be left in the cyst. If the evacuation of the fluid is prevented by its consistence, lukewarm water, or a weak solution of iodide of potassium should be injected through the catheter; at the same time the cyst should be kneaded and the patient placed in different positions, in order to allow of the thick fluid of the cyst mixing perfectly with the injection, and at the same time to bring a greater extent of the internal wall of the cavity in contact with the solution of iodide of potassium. The catheter may then be closed with a cock, and bound to the abdomen by a bandage or a strip of plaster, care being taken that from time to time—two or three times daily—the contents of the cyst be allowed to escape. The injections must be repeated every two or three days, and only when the secretion becomes offensive do they require to be often used. The cysts commonly become less after a short time. The inserted catheter has often to be replaced by a new one, but this should not be done before the seventh or eighth day after tapping, at which time the cyst, at the punctured opening, is adherent to the abdominal wall, and no discharge of the fluid collected in the cavity can take place into the peritoneum. In changing the catheter, it is well to use still larger instruments, and to make the patient remain perfectly still during the operation, in order that if the cyst should not have begun to adhere to the abdominal wall, the catheter and the injection thrown through it may not run through the abdominal cavity. Later a metal tube, furnished with a cock, may be introduced instead of the elastic catheter. The number of injections necessary for a perfect cure cannot be determined beforehand, and the first generally lasts several months. The composition of the injected fluid should not always be the same. At first a fluid should be chosen which consists of 100 parts of water, 100 parts of tincture

3. In simple paracentesis the operator often found himself obliged, quite contrary to expectation, to make an *incision into the ovarian cyst* in consequence of the viscidity of its contents; and the same thing has occurred in incompleted extirpation. And in this way we learned that it could often be performed without danger to life. The most important apprehension was excited in this treatment, by the circumstance that, in consequence of the contraction of a free evacuated cyst, the opening in it separated from that in the abdominal walls, and thus the discharge took place into the abdominal cavity. In order to guard against this, a pathological adhesion of the punctured place, either by the external application of caustics (*Récamier*, *Tavignot*, *Pereira*, and several others) or by the repeated insertion of several long needles in their circumference (*Trousseau*), or by the application of an instrument (*Rambeaud*) which fixes the cyst to the abdominal wall by narrow feathery branches directed inwards, or by laying bare the cyst, in which the abdominal wall is cut down to the latter, and it is left bare, till adhesions have formed in the extent of the wound, whereupon one proceeds to tapping or incision (*Bégin*); or, lastly, by binding or partly laying bare the cyst to the edges of the wound in the incised abdominal wall by means of a suture (*J. B. Brown*).

of iodine, and four parts of the iodide of potassium. Afterwards the quantity of the tincture should be increased, so that there may be two parts of it to one of water, and when the cyst is considerably lessened, the iodine tincture may be injected pure. Even for the largest cysts more than 200 or 300 grammes of the fluid will be seldom required. *Boinet* affirms that he has never observed any injurious consequences from this treatment.—S.

The first-mentioned attempts failed altogether, and the adhesion aimed at was not produced; on the other hand, *Bégin* is said to have obtained two successful results by his treatment; but it is to be observed, that in this case the treatment was not for ovarian cysts, for in one case it was a hydatid tumour of the liver, in the second a cystic dropsy produced by the thrust of a dagger: still there can be no doubt that this treatment can be applied to ovarian cysts likewise. *Brown* also affirms that he has operated with a not unfavourable result by the application of the suture.—(*Monthly Journal of Medical Sciences*, August, 1850; p. 179.)

The incision appears to have been first performed by *Ledran* in the year 1837. He plunged a bistoury into the lower part of the abdominal wall, through the abdominal integument, into the summit of the tumour, made an incision from four to five fingers broad, evacuated the fluid, and kept the wound open by a foreign body; hereupon followed inflammation and suppuration with exfoliation of the cyst, afterwards diminution of the secretion and obliteration of the cyst. But this favourable termination took place only in one case. *Delaporte* performed this operation with an unfavourable result; on the other hand, *Velpeau*, *Portal*, *Bonnemain*, and *Ray* are said to have effected a cure by this means. Another case is contained in the *Philosophical Transactions*, and a further one in the *Gazette Médicale de Paris* for the year 1838. In the last case the operation was performed by *Dr. Mussey*, in New York, who, with

the design of performing extirpation of a cyst, incised the abdomen from the navel to the pubes; but as extirpation appeared impossible, in consequence of extensive adhesions, he opened the cyst, and kept it open for a long time, whereupon a perfect cure is said to have resulted.

Besides these cases we will, in the tabular review of attempted, but not completed, operations for ovarian cysts, give three cases of cure by incision, namely the cases of *Dzondi*, *Galenzowski*, and *Bühring*. In these cases, as in the preceding one by *Dr. Mussey* (which we have not inserted in the tables because we have not a copy of the journal containing it) the extirpations were not completed in consequence of adhesions, and the operators contented themselves with the evacuation of the cyst and keeping it open until perfect abolition of the cavity took place. The most recent defender of the incision is *Dr. Bühring* (see his work on *The Cure of Ovarian Tumours*. Berlin, 1848). He performed the operation in three cases in which he could not complete the extirpation in consequence of adhesions. Two of these, which presented a compound tumour, and left the patient very exhausted, led to death in the course of some days; the third case, which was a simple cyst, resulted in a perfect cure. In this case the patient was in a very deplorable condition, and the operator in it deviated from the usual mode of procedure by making a lateral incision on the external border of the obliquus externus instead of the linea alba. Immediately after the opening of the cyst, about half a bucketful of blood and

decomposed, offensive, ichorous fluid flowed out. The operator introduced his hand into the interior of the sac, and brought away some handfuls of a spongy organised substance, which must have originally been separated from the walls of the cyst. This half-organised, half-decomposed, bloody, fibrinous coagulum, which in some parts presented the most striking similarity to medullary sarcoma, in others to putrid placental fragments, gave the operator little hope of a favourable result, and he made various attempts for five days to extract the evacuated cyst, which, however, were without result. After these ineffectual attempts, *Dr. Bühring* introduced a large pad of lint smeared with a very strong caustic unguent, with the intention of obliterating the cavity, and which, although on the eighth day after the operation an intestinal fistula was formed, he completely obtained after a lapse of seven weeks.

From these trials it may be assumed that incision for the production of a radical cure is far more suitable than the first two methods we have mentioned, because it affords a perfect evacuation, and subsequently a proper discharge of pus and ichorus fluid, and consequently causes the necessary shrivelling of the sac. But it must not be overlooked that it is always an operation dangerous to life; and it may also be asserted with justice that, as regards its danger, it is not less than that of ovariotomy. In our opinion, therefore, the incision can only have a rational application in those cases in which extirpation is indicated, and which is impracticable in consequence of

adhesions. These cases are also the most suited for incision, because no previous precautions are required to unite the cyst wall with the abdominal parietes. At the same time it is still to be observed that the operation is particularly suitable for simple cyst formations, or those nearly allied to them; and that the incision is to be made so extensive that the hand may be introduced into the cyst to make a more minute examination, and that a slight discharge of the contents may take place during the whole healing process. *Dr. Bühring*, therefore, attaches especial importance to the lateral incision of the abdominal parietes, so that the escape of the ichorous fluid shall be favoured.

4. Lastly, it was hoped that, by attacking the disease with double weapons, a favourable result might be obtained. With this view paracentesis was combined with the internal treatment in a more or less methodical way. This method of treatment has recently been advocated by *Isaac Baker Brown*, particularly in the *Lancet*, May 4th, 1844, and he has been followed by some physicians, who likewise affirm that they have obtained some favourable results; while others of his countrymen have been less successful, and have accused him of untruthfulness respecting some of the cases of cure contributed (see the work of *T. S. Lee*). This treatment is divided into the constitutional, local, and after-treatment. 1. The constitutional treatment consists in the external and internal application of mercurials, so that the gums may remain affected for some time. Diuretic medicaments are at the same time administered, which are afterwards

combined with tonic remedies. With these an unirritating animal diet and exercise in the open air is to be ordered. 2. The local treatment consists in the application of considerable pressure to the tumour by an abdominal bandage, by which the growth of the cysts is to be checked. When this has been adopted for some time, puncture and evacuation of the cyst is then proceeded with. 3. The after-treatment consists in the application for several weeks of a well-padded pressure bandage, and in the continued use for six weeks at least of the same medicaments as above. In four cases this treatment is said to have had the most favourable results (though this is contradicted by other physicians), and from these the author infers that young individuals in particular, and strong patients, are suitable for this treatment. In one recent case the same practitioner saw (*The Lancet*, January, 1846) renewed pain and repeated filling of the cyst follow after paracentesis. Convinced that these symptoms proceeded from inflammation and formation of pus in the cyst, he repeated the puncture in two months, evacuated ten pints of pus, and effected a perfect cure by the application of the pressure bandage. *Thomas Hunt* (*The Lancet*, January, 1846, p. 98) and *William Eccles* (*Lancet*, March, and *Jahresbericht*, von *Canstatt*, for the year 1846, band iv, s. 267) describe each a case in which this mode of treatment was successful.

We must also observe respecting it that, in our opinion, it has not realized the expectations excited, because the successful cases contributed appear to us to be not sufficiently

reliable, and unfavourable results of a similar treatment are to be found in great number: still the mode of treatment, in consequence of the comparatively slight danger attending it, is worthy of farther trial.

5. The excision of a part of the exposed cyst, with subsequent closure of the abdominal cavity, is a method of operation of which we find mention made only by *J. B. Brown* (*Monthly Journal of Medical Science*, August, 1850); but as it is worthy of consideration we cannot pass it over. This method directly adopts what the advocates of the incision described under No. 3 wish to avoid, that is, the continued discharge of the contents of the cyst into the peritoneal cavity and its continued absorption there.

We have previously mentioned the spontaneous ruptures of the cysts, the course of which are seldom without danger, while we observed in our remarks on the symptoms after tapping that a discharge of the contents of the cyst into the abdominal cavity, may be a frequent accident, and when they are not of an irritating nature, it may occur without injury. This experience may justify an operation which, with comparatively slight danger, may result in a radical cure.

The treatment by this method would be the following: The abdominal cavity is opened at a suitable place to the extent of from two to three inches, and a part of the cyst is laid bare, then punctured by a trocar, and the nature of the contents ascertained. When they are chiefly serous,

the evacuation is to be effected as completely as possible, and at the same time a part of the cyst wall is to be drawn through the incision by a small sharp hook, and to be excised, so that a moderately large opening may be made in the cyst. The edges of the wound in the cyst are then to be returned into the abdominal cavity, and the latter perfectly closed by a suture. In favourable cases the consequence of the operation is that the regenerated fluid flows through the wide opening in the cyst into the peritoneal cavity, where it is generally quickly absorbed. In this way no great collection can take place, and gradual shrivelling of the opened cyst occurs in the same manner as after spontaneous ruptures.

How far this operative procedure can cause dangerous consequences, and whether the union of the edges of the wound of the cyst with the surrounding structures may not frustrate the intended result of the operation, experience alone can decide; though it can scarcely be anticipated that, in a thin-walled cyst with few vessels, so much reaction would occur as to justify the fears alluded to.

In conclusion, *Tavignot's* proposition is still to be mentioned: he, in all cases in which the cyst is accessible *through the rectum*, but not through the vagina, prefers to open it through the former. Such cases happen, according to our observation, when, in consequence of the deep seat of simple or compound cysts in the recto-uterine cul-de-sac, the posterior wall of the vagina is much prolapsed and swollen, in which case the cysts are certainly

more accessible through the rectum than through the vagina.

Lastly, the consideration of the *extirpation of simple ovarian cysts* should be introduced here; but as the operation comes into application much more frequently in the case of compound tumours, we will make more observations on the subject when treating of them, to which we refer the reader.

§ XLVI.

From all these observations the following conclusions are deduced respecting the

INTERNAL AND SURGICAL TREATMENT OF SIMPLE OVARIAN CYSTS.

1. There is no internal treatment known from which a radical cure of ovarian cysts may be expected with great probability.

2. In the few cases in which a perfect cure resulted from internal remedies, the process of cure has remained unknown to us, and no conclusions as to the treatment of other cases have hitherto been deduced from them.

3. The internal therapeutics are, therefore, chiefly symptomatic; and in those cases where a radical treatment is aimed at, it is always to be undertaken experimentally,

and must not be carried so far that the patient suffers marked injury from it.

4. The surgical treatment, apart from extirpation, is also divided into radical and symptomatic. For a radical cure, the vaginal puncture, according to the method taught by us, is particularly suited; and in cases where it is not practicable, the incision of the cyst from the abdominal coverings, particularly when extensive adhesions exist, and at any rate the last-mentioned excision of a part of the cyst wall, present the most proper treatment. But in all these methods of operation it must not be overlooked that they are not without danger, and, consequently, are only to be performed in urgent cases. As a palliative treatment, abdominal tapping, both on account of its danger and the uncertainty of the relief it affords, should be performed only in dangerous or very distressing cases. In favourable, but at the same time very rare, instances, it may happen that, after its performance, either a perfect cure or a long continued amelioration may be the result.

§ XLVII.

It still remains to add something in this place upon the

TREATMENT IN THE COMMON ABDOMINAL TAPPING OF OVARIAN CYSTS.

First of all, there is the election of the place of puncture. When it is practicable, it is always most suitable to tap in the linea alba, as low as possible. In this place the least danger is incurred of causing great hæmorrhage from the abdominal parietes, because here they are generally thinnest: here, too, when necessary, the puncture may most readily be enlarged by an incision, since in this region there is least danger of finding any convolutions of the intestine in front of the tumour. Before tapping it should be carefully ascertained, by percussion, that no part of the bowel is situated in front at the place of puncture; the bladder should be emptied by the catheter, and the condition of the uterus ascertained by introducing the sound. The latter is necessary for two reasons: first, according to our experience, the uterus is often raised one or two inches above the edge of the pubis; or, secondly, it is pathologically enlarged in some way which happens as a complication in some cases of ovarian diseases. In general,

in a diagnostic relation, as we have previously observed in detail, as minute an examination as possible is indicated.

When there is considerable œdema of the abdominal integuments, the place of puncture may be deepened by continued pressure with the finger; and then the layer which has to be penetrated will be considerably thinned. In very large dropsical effusions, a considerable decrease in the swelling may be produced by a slight scarification of the external genitals before the puncture. The more distinct the fluctuation is, the thinner the integuments which surround the fluid may be considered. Large, thin cysts fluctuate very considerably, even on the slightest percussion. Obscure fluctuation always indicates thick walls of the cyst or small cavities. When ascites is present, it may also very easily simulate fluctuation in a quite solid ovarian tumour, and in such a complication the diagnosis should be made with all prudence.

When puncture in the linea alba is not advisable, it may be made in any other part where there is no danger of wounding the bowels or an arterial vessel; in which case that place is opened which is somewhat below the middle point of the most fluctuating part.

A straight, rather long, and large trocar is used for the operation. The latter quality is necessary, because it frequently happens that the fluid is viscid, or thick, or intermixed with flakes of exudations, with hairs, or lumps of fat, or blood, in which case none at all, or very little, can be evacuated through a narrow tube.

Besides, a long, strong, metal sound may be kept in readiness, which, immediately after the removal of the trocar, may be introduced through the canula, and by means of it the size of the punctured cyst and the condition of its walls may be ascertained.* For this purpose the sound is introduced in different directions, and after collapse of the cyst has taken place, the head of the sound is followed by the hand externally as far as it is accessible.

The patient will be best operated on sitting in a chair, or in bed when there is uncommon faintness. In order to insure uniform compression of the abdomen, it is convenient to use a broad, many-tailed, abdominal bandage, furnished with slits, which is managed by two assistants standing at the sides. But as this compression does not generally suffice, more assistance must be given by circumscribing the pressure by means of the hand. When great pressure, however, is not well borne, it must not be continued too long, because, otherwise, as already stated, severe attacks and, in compound cystoids, even ruptures of the surrounding cysts may be the consequence of it.

When the trocar is introduced sufficiently deep, and it happens that the contents are too viscid and cannot be evacuated through a large canula, when there are urgent indications for evacuation, incision may be had recourse to.

* See a previous note for a description of the sound recommended by Dr. Grailly Hewitt for a similar purpose.

For this purpose a long, hollow director, without a handle, is introduced through the canula, which is withdrawn, and the director left: a probe-pointed bistoury is then guided upon the director into the cyst, and a corresponding long incision made with it through the whole walls which enclose the fluid. In order to fix the cyst, in cases in which it is free, a curved, blunt hook may be used, which is bound to the superior angle of the wound. In cases where this treatment is not easily practicable in consequence of considerable thickness of the walls, the incision should be completed by making still deeper cuts with an ordinary scalpel. To fix the cyst, when necessary, one or two hooks may be applied.

In all these operations, which have only a palliative intention, the entrance of air into the cyst should be guarded against as much as possible, because slight decomposition of the contents may be induced by it.

After evacuation has been completed, the application of a moderately-strong pressure bandage is suitable. In cases where a palliative treatment only is intended, the after treatment is only dietetic. Internal cystic hæmorrhages are to be combated by a strong compression bandage; continued attacks of fainting by analeptic remedies; intense pains by the administration of morphia; and consecutive inflammatory symptoms to be treated antiphlogistically, according to the degree of intensity.

VI. COMPOUND CYSTS OF THE OVARIES.

a. CYSTOID; b. ALVEOLAR DEGENERATION; c. CYSTO-SARCOMA AND CYSTOID CANCER.

§ XLVIII.

For the purposes of clinical diagnosis we think it advisable to consider in one division all those degenerations of the ovaries which consist principally of great cavities filled with fluid. Although in the dead body these diseases may be separated into several sharply-defined forms, and as they are essentially different genetically and morphologically, still it is not possible to follow those distinctions far at the bedside. But on that account we are not the less willing, at least in our anatomical observations, to consider the differences which are presented, so far as our experience permits, and to endeavour to deduce therefrom the scanty results which are applicable to practice.

§ XLIX.

a. PATHOLOGICAL ANATOMY.

The origin of the several cyst cavities in the ovary, as we have already stated, is very different:

1. It not unfrequently happens that so soon as the degeneration of the Graafian vesicles, which we have described, takes place, several of these bodies simultaneously become dropsical. This degeneration has been observed in all stages of development. Thus at the commencement of the disease we have found in one or both ovaries, which were moderately enlarged, a different number of follicles, distended to the size of a pea or a cherry; in other respects little changed. From this small size we have followed this degeneration to the highest development, in which a conglomeration of cysts, larger than a head, were found in great number. Since it is known that a perpetual regeneration of the follicles is taking place, it is obvious that when the disease makes such rapid progress the number of the follicles must often be very great.*

* [This aggregation of simple cysts is generally termed, by most authors, multilocular; but we consider that Dr. Farre (*op. cit.*, p. 579) has selected a very expressive and proper appellation when he describes them as "multiple," reserving the term, multilocular, for those cysts having endogenous growths. He gives good illustrations of each form.—J. C.]

2. It also happens that, as in other structures, new formations are developed in the ovary which do not proceed from the follicle. This often takes place in two ways: first, they may be formed in a follicle which is already enlarged; in the second place, externally to it, and even on the outer surface of the ovary.

The disposition to the formation of new cysts is very marked in the female genitals generally. They are often observed in the tubes, between the different duplicatures of the peritoneum of the pelvis, and even, in some rare cases, in the uterus. In the ovary they are either formed in the walls of a cyst already existing, or from the contents of the cyst by endogenous development; and thus primary and secondary cysts are produced. It even happens that, after long continuance of the disease, a third series of cysts are developed, so that the secondary cysts in their turn contain smaller cysts—a process which Hodgkin in particular has described with great care (*Medico-Chirurgical Transactions*, t. xv, p. 2). In older cysts, whose walls consist of several layers, we can follow this process, also, through several stages of development, and often in a single case. In some cases, small, and even tolerably large, younger cysts are formed in the walls of the older cysts, which sometimes cause a protuberance internally, sometimes externally. Sometimes this process is sharply circumscribed, and confined to one side; from which place various conglomerate secondary cysts grow into the cavity of the primary cyst, and in time they may entirely fill it;

at other times the development proceeds from several points. Besides these cysts embedded in the walls of the primary cysts, others also occur which are attached by a pedicle to the internal wall, and often form racemose, conglomerate, cystic cavities, which also entirely fill the primary cysts, and by their continual growth may produce rupture of the latter.

Besides the secondary and tertiary cyst-formations, more or less solid excrescences of a different kind likewise occur in the primary and secondary cysts. They have recently been made the object of careful investigation, particularly by Rokitansky.—(*Ueber die Cyste. Aus dem I. Bande der Denkschriften der mathematisch—naturwissenschaftlichen Klasse der kais.* Akademie der Wissenschaften besonders abgedruckt. Wien, 1849, s. 3.)

The excrescences at their commencement form either small, solid, wart-shaped eminences, which are gradually developed into a small sacculated, cauliflower-shaped, fibrous tumour, which may sometimes be so large as to nearly fill the cyst. In its structure and character it corresponds for the most part with the cysto-sarcoma phyllodes described by J. Müller.—(*Ueber den feinern Bau und die Formen der Krankhaften Geschwülste*, Berlin, 1838, I. Lief, s. 56.) Or it sometimes forms delicate, knotty, ramifying cavities, which are either situated in isolated positions on the internal surface of the cyst wall, from which they sometimes become separated and are found in the fluid. Sometimes they occur in groups, or even in great masses;

and thus either give the cyst wall a villous character, or in the course of time they quite fill the cysts or break through and grow free out of the contracted cyst into the abdominal cavity. These excrescences undergo various metamorphoses in their further development, and form amongst each other innumerable small cysts, and are more or less vascular, in which case they sometimes cause considerable spontaneous hæmorrhage.

Finally, in some cases, chiefly in cysts with gelatinous contents, new cysts appear to be formed by simple aggregations of the organizable parts of the contents, which at first are very soft and easily destroyed, but they gradually acquire consistence and size, and either enter into combinations with the primary cyst, or are retained free in its cavity. Acephalocysts are reported by several authors to have been observed in the ovaries; but they have not been perceived by us as yet. Undoubtedly errors have frequently occurred in these cases, and torn-off secondary cysts have been taken for acephalocysts.

In two cases, in which a gelatinous exudation covered the greater part of the degenerated ovary, but which was easily separated, we observed very numerous delicate cysts of different sizes, having no very marked organic connection with the ovary. Most of them were formed of such thin membranes that they were destroyed even by the most delicate handling.

By these different processes the *compound cyst formations of the ovary* are produced, which we will designate

by the name of *cystoids*. In connection with these cysts the following facts are worthy of remark:

When simple follicular degenerations become very large and old, a secondary formation of cysts is generally developed in them; or other follicles are implicated in the process of the disease, so that extensive cyst degenerations may remain so long in a low stage of development that the character of the disease is not essentially altered. In the cystoids, too, some of the cysts are generally enlarged to the exclusion of the rest, which are less developed: in which case the largest cysts generally lie superiorly, the smaller inferiorly. In some instances, however, small, secondary cysts may be developed upon the apex, as well as upon any other part of the primary structure.

Not unfrequently the different cysts which are in contact with each other form a mutual communication either by atrophy of the contiguous walls, or by inflammatory perforation. When once a communication is formed, it becomes still larger as the growth of the cyst continues, and the walls of partition become more and more imperfect, so that ultimately only sickle-shaped, string-like fragments of them are left. One or more of the secondary growths, as we have already stated, may increase to such a size that they quite fill the primary cysts. In the first case a double cyst wall encloses the cavity, which has become simple.

The cyst is very variable as regards the structure of its walls and its contents. The primary cyst is generally much thicker, and its walls, either in their whole circum-

ference or in their different parts, sometimes consist of several layers; the secondary cysts, on the contrary, generally have thinner walls and are simple. At the base of the cyst, the intermediate tissue often presents a sarcomatous, fibrous, or areolar degeneration, and has a different density and thickness. The contents in the contiguous cysts may be quite different: in some cavities they are chiefly aqueous; in others colloid, albuminous, or fibrinous; sometimes they contain pus, or fat, hair, teeth, &c. When a communication is formed between the cysts, the contents of the one may be mixed with that of the others. It is also to be observed that the more compound a cyst is, the less likely are its contents to be purely serous.

The different kinds of cystoid are capable of a very considerable growth, and comprise the most enormous pathological products of the human body: in some instances they weigh from 50 to 100 lbs., and distend the abdomen to the greatest extent. Like the simple cysts, the cystoid may remain for years in a low stage of development. They often take a sudden start in their growth, and then become stationary again.

The separate cysts in cystoid disease may undergo all the metamorphoses of which we have made mention in the simple follicular enlargement. It not unfrequently happens that the cysts are attacked by inflammation, which may cause a fibrinous exudation or the formation of pus, by which perforation, both of the partition walls

of the different cavities and also of the adjacent structures, particularly of the rectum and the anterior abdominal wall, may be produced. Hæmorrhage not unfrequently takes place in some cysts, and in the course of the disease extends by degrees to others, and in time the contents undergo the well-known metamorphosis of effused blood. Ruptures of some of the smaller cysts, followed by discharge of their contents into the abdominal cavity, have sometimes happened, and generally caused fatal diffuse peritonitis. The rapid growth of some cystoids generally produces circumscribed peritonitis, followed by adhesion of the tumour to the adjacent parts; however, we have seen very large cystoids run their course without any trace of peritoneal inflammation. The more compound the cyst is, the less it appears disposed to retrograde in its growth, so that even in the separate cysts no spontaneous shrivelling or ossification is perceived.

Though we often find the cystoid without further complications, yet not unfrequently combinations with various other foreign formations take place, by which the compound degenerations, which we will afterwards mention, are produced.

§ L.

THE ALVEOLAR DEGENERATION OF THE OVARY

Is especially excluded from the foregoing description of the formation of cysts. In cases where the disease is purely and distinctly developed, it appears as a breaking up of the stroma of the ovary into cellular cavities (alveoli) closely aggregated together, which for the most part enclose a homogenous, colloid substance of a varying degree of consistency; for which reason the form of disease is especially distinguished by the name of *ovarian colloid.*

The cellular spaces apparently do not proceed from the follicles; for in no stage do they present follicular properties, and they cannot in general be represented as isolated cavities; besides, the number of the cellular spaces is so considerable, often numbering several thousands, that we cannot easily trace their origin to the degenerated follicles: on the contrary, in general degeneration of the ovaries the follicles appear to be mostly destroyed, so that they cannot be found as such. In this form of disease, the alveoli are met with of different sizes in the ovary: in one and the same case they are met with from a scarcely perceptible size to that of a fist, a head, or even larger; in which case the largest cavities

generally lie internally and superiorly. The intermediate tissue lying between these great interstices, and also the interstitial walls, are generally completely set with smaller cells—an arrangement of the tissues which may be seen externally through the transparent membrane. Not unfrequently the larger cavities form a communication with each other by a perforated opening, and they then present a sinuous, irregular cavity, while the smaller spaces lose their round form from their close juxta-position, and appear facetted.

The external form of this degeneration, in cases where the cellular spaces have not attained any considerable size, is pretty uniformly rounded. Some cells, however, are greatly developed, and the external form becomes more or less rugged.

This affection is also observed with or without peritonitis. In some cases it attains a very large size. Indeed, of all other degenerations of the ovary, this, according to our observation, is susceptible of the most rapid growth.

Its frequent complication with cancerous deposits is also worthy of notice, a circumstance which caused this disease to be included in the forms of cancer. But we have observed alveolar degeneration of considerable extent remain in the system for a long series of years without any remarkable bad effects, and without any perceptible trace of cancer; and therefore we look upon it as only an accidental although frequent complication, which we have

remarked to be seldom absent, the more enormous the tumour is the more rapid is its development.

A partial alveolar degeneration of the stroma not unfrequently occurs, as we have already stated, to a greater or less extent, in the intermediate tissue in cystoid disease.

The contents of some of the alveoli are generally remarkably viscid, light yellow, grey, or else creamlike, or brownish, syrupy, or colloid. In some of the larger cavities, on the contrary, they are sometimes so thin that they flow without difficulty. In other cases, even in very large tumours, they are thoroughly gelatinous, or consist partly of a solid, crumbling, substance; so that, when a puncture is made, a very inconsiderable discharge or none at all takes place. When the growth is rapid the anatomical condition of the alveoli is essentially changed. In consequence of the extreme tension of the walls of the alveoli, they become very thin, and are in part destroyed; and then the colloid substance is found embedded in a network of filaments, lamellæ, or very thin membrane, which from their variety of arrangement often run towards the periphery in filamentous bundles.

In consequence of the complication of alveolar with follicular degeneration, with the formation of new cysts, and also with solid, fibrous tumours, and cancer, various not-easily-classified ovarian affections are produced, the importance of which in relation to the system, as well as their course and termination, are equally various in the simple

as in the compound forms of the disease: most of these are described in the special account of each disease, and therefore will not be further alluded to in this place.

§ LI.

c. THE CYSTO-SARCOMA AND CYSTOID CANCER

Is the third form of disease we have to describe here, but only those forms in which the formation of dropsical cavities preponderates over the sarcomatous mass, while under opposite conditions cysto-sarcoma must be classed with solid tumours.

1. The innocent cysto-sarcoma appears in the ovary in the same manner as it occurs in other structures, and as it is met with in the uterus in particular. At the same time, comparatively speaking, it is seen in the ovary more frequently, and in its most marked form. In this case, also, the whole ovary undergoes a pathological metamorphosis; hence a tumour is formed whose parenchyma consists chiefly of cellular and fibrous tissue, in their different degrees of development and stages of transition, and either irregular cavities or regular cysts consisting of a fibrous membrane and lined with epithelium are developed in its interior. According to the different degree of development of the cysts and cavities which are

formed in the parenchymatous tissue, the tumour appears either as a solid structure or as a fluctuating growth, or presents a form intermediate to these; and it sometimes depends solely on the degree of development whether, at the bedside, we shall consider the malady as belonging to this or that form of disease.

In time the cyst formations may predominate so much over the solid mass, that the cysto-sarcoma approaches very near to a simple cystoid. In cysto-sarcoma we observe the formation of secondary cysts, the mutual adhesions of separate cysts, and various kinds of growths upon the internal surface of the cyst wall. The contents also present the most different properties, and are not unfrequently colloid; although we have seen fluids rich in serum, albumen, fibrine, fat, pus, putrilage, &c., formed. It is particularly worthy of remark that, in this form, very considerable hæmorrhage sometimes takes place between the interstices of the sarcomatous tumour, which causes a rapid increase in size.

The cysto-sarcoma is susceptible of extraordinary growth, and is one of the most colossal tumours formed in the system.

2. The *cystoid cancer* comes into consideration in the same manner as the cysto-sarcoma only when the cyst formations predominate over the cancerous mass, and can be recognised by external examination.

As we shall afterwards speak more at length upon cancerous formations, it will suffice to mention that

occasionally it may happen that cavities of different sizes, or even isolated cysts, may be formed in a primitive, principally medullary cancer, which at one time may grow to a very large size with the most diversified forms; while at another time a malignant cancer may be developed in a cyst formation or an alveolar degeneration. It sometimes happens that a large, solid, cancerous mass liquifies in its centre, and is gradually changed into a fluctuating tumour which, in an anatomical point of view, cannot properly be considered as belonging to the diseases under consideration.

§ LII.

SYMPTOMS.

All the degenerations now described are observed in different periods of life — in young females as well as aged women. Respecting the etiology, we have nothing more to add to what we have already stated in the general part of the treatise. In the majority of cases the symptoms are the same as in simple follicular degeneration, and we have therefore little to add respecting these forms of disease, but refer to what has already been said.

Partly in consequence of the rapid growth which often occurs in these forms of disease, partly because the separate cysts are developed with unequal rapidity, paroxysms of

painful tension of the peritoneum are often observed in them, whence intense pain in the sacral and lumbar regions is produced, and also in the pelvic and anterior abdominal regions, combined with a disposition to, or even actual, sickness. Inflammatory attacks are not unfrequently observed proceeding partly from the peritoneal surface of the degenerated ovary, and partly from the internal wall of the cyst. In the first case the usual signs of circumscribed peritonitis are met with; but, in the latter, manifestations of general reaction only, without any remarkable local symptoms, are observed.

The most severe attacks, apart from spontaneous rupture of the different cysts, accompany perforation of the adjacent structures, which are not unfrequent in cystoid formations. This process, however, according to our observation, occurs more frequently in the smaller than in the larger of these tumours. In cases where they are deeply situated in the pelvis, when perforation has taken place, they often cause considerable symptoms of compression of the pelvic organs, and they may prove fatal, partly from this cause, and also from inflammatory symptoms accompanying perforation, an event which we have observed in three cases. In four other cases, on the other hand, we found perforation, with severe general and local symptoms, after a course of several days, and always through the rectum: but after its occurrence considerable amelioration suddenly set in, and a more or less considerable gelatinous discharge took place from the rectum. In the

one case, after continued health for two years, in the other five and a quarter years, recurrent perforation followed, with symptoms similar to those on the first occasion. In the third case after three years, in the fourth after one year, perforation did not return, when the patients were withdrawn from our observation.

Whether perforation occurs in simple alveolar degeneration is not known to us, we know of no case of spontaneous rupture of an ovary affected with this disease, although its occurrence is easily conceivable where the walls of the large alveoli are very thin; we have seen it produced in two cases with a fatal result, in consequence of strong compression of the abdomen in the operation of tapping. In cystoids, on the other hand, as we have previously observed, spontaneous ruptures followed by the discharge of their contents into the abdominal cavity, occur more frequently in the small than in the large cysts. According to the properties of their contents, they sometimes cause slight and at other times very dangerous attacks of peritonitis, which generally prove fatal when the contents are very irritating.

Cysto-sarcoma and cystoid cancer, in respect of their symptoms during life, present no peculiarities of such a nature as to make them especially prominent. Respecting cancerous formations, however, we must mention that another group of symptoms, to which we shall afterwards allude, may be produced by the infiltrating of the adjacent structures with cancer.

As all the forms of disease described here, but especially the alveolar degeneration, often present a rapid growth, and their contents are commonly rich in organic matters; a general cachexy is not unfrequently combined with other symptoms. The general emaciation is more or less striking; the skin wrinkled, the mucuous membranes pale, and in some cases œdema of the skin, and also dropsical effusions into the cavities of the body, are combined with the former. In some cases the dropsy disappears during the course of the disease, and shows considerable variations in its extent; while in other cases it leads to death by producing œdema of the lungs. The cachexy is generally most marked in rapid growing cancers, and even in very small deposits it is sometimes very striking.

It must not remain unobserved, that when the size of the tumour is small and continues stationary, all these diseases may be carried in the body for many years without any remarkable bad effects, and even in cases where they have attained a considerable size, but are slowly developed, they may exist with comparative health; and we have observed extensive cancerous formations in one case where there was no apparent cachexy.

As regards the process of cure in these forms of disease, far less is to be expected than in the simple cysts; and it only takes place in so far as the cystoids approach to simple follicular degeneration, that is when with a considerably developed follicle less developed cysts occur, which remain stationary. Under these conditions the same healing

processes may take place which we have previously described. But when several large cysts are contiguous, or secondary cysts are developed in a primary cyst, a satisfactory cure is not to be thought of, because the one cyst prevents the shrivelling of the other, and a simultaneous favourable metamorphosis of the whole tumour cannot be assumed, and still less demonstrated. The alveolar and sarcomatous degenerations present similar conditions.

The most favourable and perfect cure, as well after spontaneous effusions as after tapping, is when an inflammatory process attacks the evacuated cysts and leads to degenerations, and produces such a metamorphosis in the still undischarged contiguous cysts, that a gradual absorption of the exuded contents, and with it shrivelling of the whole tumour follows. According to our observation this event is not rare in small cysts, and the result is sometimes so favourable that the patients in a tolerably short time after perforation has taken place may be considered perfectly cured. It may also happen as a favourable circumstance, that a more or less considerable diminution of the whole tumour sets in; this occurs most strikingly in cysto-sarcoma. In some cases, the disease often attaining a considerable development may remain stationary, and with this change a gradual moderation of the symptoms and a general amelioration takes place.

Of the cystoid we have to observe besides, that it is met with more frequently than other forms of disease in

both ovaries, although it generally preponderates on one side.*

* It is an ascertained fact, that even considerable formations of tumours of *one ovary* do not preclude the capability of conception, and, therefore, the influence of pregnancy upon ovarian tumours, and that of the latter upon the former, requires a brief description. The hyperæmia of the pelvic structures occasioned by pregnancy, necessarily extends to the diseased ovaries; plastic materials are also furnished to them in great quantity, and the consequence of this almost invariably is a more rapid increase of the volume of the tumour during pregnancy. We have seen this most marked in the compound cystoids and cysto-carcinomas of the ovaries, while the simple cysts commonly show a less rapid enlargement. But when the tumour has attained a somewhat more considerable volume, it may prevent the distension of the uterus in its ascent from the pelvic into the abdominal cavity, and in consequence of the steadily increasing pressure give rise to premature contractions, and thus be the occasion of an abortion or a premature labour. It may also happen that the wall of the cyst loosened and softened by the increased afflux of blood, is unable to resist the pressure exercised upon it by the enlarging uterus, so that it bursts, discharges its contents into the peritoneal cavity and causes a fatal peritonitis, as we have had an opportunity of observing in a case which occurred in the year 1850, in Professor *Jaksch's* ward. During parturition, too, the different ovarian tumours, when they are situated partly or wholly within the small pelvis may be the source of danger to the mother and child, because they cause a disproportion in space which sometimes has to be overcome by operative interference. Other cases are also published, where the tumour filled with fluid suddenly burst in consequence of the pressure, and discharged its contents either through the vagina or the rectum, and thus spontaneously removed the impediment to labour; finally, it has also repeatedly happened that the soft tumour lying within the pelvis, has been so compressed by the advancing head, and pressed so flat, that the labour could take its course without further disturbance. The puerperal period too is not favourable to women affected with ovarian tumours; because at this time rapid increase in the volume of these tumours has been observed, and in general the number of cases is not small where these pathological conditions begin to form during the puerperal period and then make continued progress.—S.

§ LIII.

DIAGNOSIS.

In a diagnostic point of view, we must also confine ourselves to such descriptions as are of principal importance in the diseases in question: for other information we must refer to our previous communications.

Small ovarian degenerations of the four forms described which do not exceed the size of a fist, with the exception of those cases in which the diseased ovary is deeply situated in the space of Douglas and can be distinctly felt through the rectum, cannot be generally recognised as such through the abdominal wall and through the vagina, because they generally feel too dense and too uniform to permit of any nearer judgment upon their compound texture. Even larger tumours of this character can only be minutely diagnosed, when some of the cysts preponderate greatly over the others, and the examination is also favoured by thin, yielding, abdominal walls. On the other hand when the cysts have attained a considerable size, the diagnosis becomes so much easier, because the boundaries of the separate cysts as well as the knotty form of the tumour are more developed; and in like manner the abdominal integument is irregularly elevated. That the several eminences are formed by the cysts may be demonstrated by careful palpation and percussion; the latter of which

may often detect a fluctuation corresponding to the size of the several cysts, but not penetrating the whole tumour. When a large tumour consists mostly of small cysts, which is particularly the case in less extensive alveolar degenerations, it does not present fluctuation on external percussion, in which case it requires an experienced sense of touch to deteet the nature of the tumour by palpation. In alveolar degenerations and in cysto-sarcoma, fluctuation is also indistinct even in large tumours in proportion to the thickness of their walls. In both these last forms of disease the lower parts of the tumour, so far as they are accessible through the vaginal floor and the rectum, never fluctuate, but feel dense, elastic, and generally tolerably uniform; in the cystoid, on the contrary, the fluctuation of the different cysts frequently extends downwards into the pelvis.

When an ovarian tumour exceeds the size of a pregnant uterus at full term, and has grown to this extent in a short time (for instance in the course of half a year or a year) we must always suspect that we have to do with one of the compound forms, and not with a simple follicular degeneration. The development of the tumour may also furnish some diagnostic data. Thus the cystoids, even when of small size, form bodies which consist of fluctuating cyst cavities, while the alveolar degeneration, the cysto-sarcoma, and primitive cystoid cancer always proceed from a solid tumour and only begin to fluctuate after considerable development. The

hardness too, in the cysto-sarcomas always remains very marked, while the alveolar degenerations always present great elasticity.

The assistance of the physician is often required when symptoms of compression or perforation are caused by small cystoids. Some patients are scarcely conscious of any abnormity in the pelvis, and are suddenly attacked by a severe illness, which is apparently caused by a rapid growing tumour in the pelvis. In which case the diagnosis may be rendered difficult by the painfulness of the external and internal exploration, and yet in general these must not be omitted. It is especially important for the prognosis to ascertain that we have to do with cyst-formations in the ovary, and for this reason it is first of all necessary to ascertain minutely the relative situations of the internal organs and the rectum as was described in § VI, and also to determine as accurately as possible the structure of the tumour.

It is obvious that with all care in the reception of the *history*, and in the examination of the patient, even in very highly developed forms of the disease, it is sometimes impossible to determine at the bedside which of the described affections is present, and that so much the more, because a variety of complications may impede the diagnosis. In a prognostic point of view it is especially important, first of all to exclude the cancerous forms; yet it is exactly in this particular that the difficulty of the diagnosis is sometimes insuperable, of which we shall afterwards speak.

§ LIV.

THERAPEUTICS.

In general the same rule holds good in these forms as was laid down respecting the treatment of the simple cysts, that in the majority of cases we are confined to symptomatic treatment. The question of a radical treatment by internal remedies must not be entertained after the diagnosis of the disease under consideration, for then, as we have already observed, the disease must have made considerable progress, in which case the inefficacy of our remedies is the more obvious, for even in the simple forms their influence is questionable. Still by combating some of the severest symptoms by a suitable dietetic and moderate derivative treatment, in all probability art may be able to limit the progress of the disease. Among the most severe symptoms, which must be treated symptomatically, are the peritoneal, internal, cystic inflammations, and symptoms of compression, and perforation. As the result of these attacks we have seen obstinate constipation, ischuria, prolapsus of the vagina, uterus, and rectum, painful swelling of these parts, nausea, and severe general febrile symptoms come on, and in other cases where local bleedings, baths, clysters, catheterizing, ecoprotic doses of calomel do not suffice, it may be necessary to puncture in the proper way, which is most commonly performed through the rectum or vagina, to produce artificial evacuation.

It also appears desirable in many cases to moderate the attacks of pain caused by traction, by the growing tumour, and the agrypnia, sickness, and loss of appetite frequently combined with it, narcotic remedies, especially morphia, may be often employed for these symptoms with success. In other cases the milder purgatives afford so much the more ease, because they generally obviate the constipation which exists. In such cases it is most proper to subject the patient to a regulated mineral water cure. Uniform compression by suitable abdominal bandages is also often beneficial.

When at length the size of the different cysts becomes so considerable that the difficulty and danger occasioned by it are much increased, evacuation by tapping may be urgently necessary in this form of disease; respecting this we refer to what we have said in § XLIV; which also finds its application here with certain modifications. It is evident from the foregoing that a radical cure by simple tapping can be less expected in this case than in the simple cyst-formation, and it only takes place when a cystoid or cysto-sarcoma, by the excessive development of a cyst, approaches to a simple follicular dropsy. As the contents of the cysts in this form are often very rich in organic matters, its regeneration is also very exhausting to the economy; besides, when the fluid is very viscid, it is evacuated with difficulty through the puncture, and in urgent cases the wound may have to be widened. As regards the evacuation, the result in this form of

disease is often very unsatisfactory, because it may happen that a small cyst has accidentally been penetrated. In this respect it is important to ascertain by a careful examination the size of the cysts which are to be tapped, and especially to measure minutely the extent of the fluctuation. In cystoid and cysto-sarcoma it happens very often that, after tapping, intense hæmorrhage and inflammation of the cyst occur, which may occasion dangerous symptoms; the choice of the place of puncture is also less free in these forms, and puncture in the linea alba is not always possible, because the choice depends upon the site of the cyst which is to be tapped.

From all this it results, that the consequences of tapping in these forms of disease are still more unfavourable than in evacuation of the simple cysts, and that we must act with still greater prudence, particularly in alveolar and cancerous cyst-formations, which are least suited to much operative procedure. In consequence of the unfavourable conditions of the treatment of these diseases and the danger accompanying them, a still bolder and perfectly decisive treatment of the disease was resolved on, that is extirpation of the degenerated ovary.

§ LV.

EXTIRPATION

Has certainly not been exclusively employed as a radical treatment in these forms of disease, but has hitherto been resorted to without any discriminate choice in all large ovarian tumours, which held out no other mode of cure, and were suitable for the operation; however the majority of cases operated upon were cystoid and cysto-sarcoma, which is accounted for by the fact that these affections occur most frequently, attain a very great size, and are often very distressing forms of disease. For these reasons we have next to consider this operation, which we have frequently referred to in simple follicular degeneration, and will afterwards return to it. It appears the operation was mentioned by *Schlenker* and *Williers* in the years 1723 and 1731. But it first came into favour in the present century principally; and within the last twenty years English and American physicians have interested themselves in its history, but the Germans have taken very little interest in the inquiry, and the French to this day feel an invincible dislike to this operation.

At present it has been undoubtedly proved by many facts that women can lose an ovary, or even both by operation, without any considerable injurious consequences

being caused thereby (sterility in the latter case excepted). The operation in some cases was also acceptable; for it freed the patient not only from a very painful, but also from a dangerous malady, and led to perfect health. As regards the question respecting the admissibility of the operation, which is next to be considered, the conditions must first of all be discovered under which such favourable results were obtained. For this end several physicians have endeavoured to draw out statistical tables of the results of ovariotomy. One of the most recent and most extensive of these tables has been given by Atlee, (*American Journal of Medical Sciences*, No. 38, p. 318), which contains 179 cases of attempted and completed operations, to which we shall afterwards return.

In the first edition of these lectures we also gave a review of 122 cases, which in consequence of their great interest are increased by a few, and inserted here statistically arranged.* To give a perfect statistical account of ovariotomy, we consider an impossibility at present, because the number of operations which are not published are always on the increase. This evil certainly could not be avoided in the statistical reviews previously given, but the disadvantage resulting from this state of matters was less considerable some time ago, because in consequence of its novelty the operation was regarded with great

* The tables referred to in the text were found incorrect, scanty in detail, and incomplete, they have been therefore omitted and new ones prepared which are placed in the appendix. — J. C.

attention in all quarters, so that most of the operations came to the knowledge of the public. * * * * *

Even if all the cases of completed and attempted extirpations were known to us, no correct conclusion upon the advisability of the operation could be deduced from the results hitherto obtained, that is, from the numerical comparison alone; because the choice of the cases, the operative procedure, and the after treatment produce essential changes in the results obtained, and therefore more favourable statistics may be reasonably expected in future, by a greater attention on the part of the operators to these indications. When we consider the results of the practice of some physicians, we must certainly be astonished at the successful results of the operations performed by them. Thus, Bird has operated six successive times with success; Clay, in fourteen cases in which the operation was completed, cured eleven patients; Walne and Ephraim M. Dowell in six extirpations lost only one patient; Lane, in five operations, had to lament one death only. On the other hand, several others have only unsuccessful cases to show. Thus, for instance, Lizars has operated four times: once he opened the body and found no tumour—the patient survived; a second time he was obliged to leave the operation uncompleted in consequence of adhesions; a third time he found both ovaries diseased, and left one; the two latter patients recovered from the operation, while the fourth, in whom the operation was completed, died in fifty-six hours. Bühring also operated four times

and lost three patients, but saved the fourth, in whom the operation could not be completed by incision. We ourselves, also, have operated five times without success; and others have had similar results.

It follows, from all that has been said, that at present it is very difficult to come to a well-grounded conclusion upon this operation; and we can, therefore, only endeavour in the following to approach the truth as nearly as possible.

It is probable that about half of the patients hitherto operated upon have lost their lives, and generally in a few hours or days. This circumstance, in particular, ought to be taken into consideration in cases in which it is proposed to perform the operation in an individual who is only slightly or not at all incommoded by the disease, and whose life is not decidedly threatened. A far greater failure in the operation is, that we possess no data for the prognosis, so that the issue of the operation can never be predicted with any degree of definiteness, and consequently in every case apparently not so suitable it must be taken in the most unfavourable light. Further, it is to be observed that the after diseases in some patients were very tedious and painful. Thus peritoneal exudations with recurring inflammatory attacks, abdominal fistula, phlebitis, and extensive sloughing of the skin kept many patients in bed for months, and often in the end caused their death.

Finally, it must yet be made the subject of inquiry

in how far a relapse of the cancer did not take place in many patients from whom tumours, apparently cancerous, were removed, although there is no confirmatory experience known to us. It must be further mentioned that the operation, in some cases, is very difficult to perform, tedious, and painful, and must often be adandoned after it has been tolerably pretty far advanced. Thus very great adhesions, and uncommon breadth and shortness of the pedicle of the tumour, place insurmountable obstacles in the way of the operation; and although such incomplete operations carry off comparatively few individuals at the moment, they make the condition of the patient much more deplorable than before. The difficulty of the diagnosis should also be taken into consideration. Apart from the fact that the presence of adhesions and the condition of the pedicle cannot be diagnosed with certainty before the operation, the detection of an ovarian disease in and by itself is often very difficult. This difficulty is certainly combated by the fact that in cases where there is a doubt of the diagnosis one does not operate; but this prudence is not peculiar to every lover of operations, as recent English literature shows, in which uterine fibroids sometimes being found, instead of ovarian tumours, the former were extirpated, and brought the patient to a speedy death.

But on the other hand it must not remain unmentioned that the disease is often so distressing that the most urgent wish is expressed by the patient to be freed from the tumour, even with the apparent danger to life. In many

cases, also, as the disease progresses, a longer continuance of life is not to be thought of, while in such cases the operation may have a perfectly satisfactory termination. Besides, this result was obtained in no small number of patients in a very short time, so that several could leave their bed in from three to five weeks. In some patients the operation was easily and quickly performed, and its immediate consequences were not always very distressing or unsatisfactory.

§ LVI.

In contrasting these different bright and shady sides of the operation, we can only speak conditionally as to its admissibility, and believe that it is to be so much the less wholly repudiated, because it is to be expected that with the progress of diagnosis the results of this operation will be still more favourable. The conditions under which the performance of this operation appear admissible are in short the following:

1. Continued progress of the disease which threatens danger to life, and yet leaves the hope that the operation will be borne. There undoubtedly are such cases; indeed the majority of those hitherto operated upon were in a stage of the disease in which the tumour was very large, the condition of the patient very deplorable, and the use of other remedies ineffectual. The rational view, that by

operating earlier more favourable results might have been attained, has not in general been confirmed by experience; because when the progress of the disease is slight the life of the patient is not at stake, and the further course of the disease may often turn out comparatively favourable.

2. In exceptional cases, small tumours, even, may urgently require the operation, when they cause symptoms which are dangerous: for instance, obstinate dropsy, symptoms of impaction, unmanageable ischuria, great tenderness, continued agrypnia, loss of appetite, &c., when these symptoms belong to a disease which permits the operation.

3. Suitability of the case for the operation.

The free ovarian tumours, or those fixed by less extensive pathological adhesions, are most suited for the operation. Moderately firm adhesions may be separated successfully; while intimate adhesions of the tumour to the surrounding parts make the operation either impracticable, or the attempt has generally fatal consequences. The course of the disease generally gives none, or only unsatisfactory data to enable us to decide whether adhesions are present, and to what extent; and when we can decide that adhesions from peritonitis are present, contrary to expectation, they are often inconsiderable, and consequently no obstacle to the operation; while on the other hand very intimate adhesions may be present without manifesting any marked symptoms. Small tumours often permit their moveability to be detected readily, while

great tumours are immoveable in consequence of the narrowing of the abdominal space. Respiratory movements do not communicate with them in such a way that they may be made a diagnostic help. It often happens that, when the surface of the tumour is rough, friction sounds are produced on its anterior wall by the respiratory movements of the abdomen, which would indicate moveability on the part of the tumour, although they do not make long, membranous, deep-seated adhesions impossible. *T. S. Lee* says—

"When an ovarian sac has attained a size which is productive of great inconvenience and distress to the neighbouring organs, the parietes of the abdomen become greatly attenuated, and the space between the two recti abdominalis is much enlarged: this is well seen if the patient be told, while lying on her back, to raise herself into the sitting posture without the assistance of her arms; and if the sac within be free in its motions, it will immediately be protruded through the space between the two recti muscles, and produce an oval enlargement; but supposing the cyst to be intimately adherent in front, no such bulging will take place."—(*Op. cit.*, p. 189.)

The reason of this appearance can only lie in the fact that, when adhesions are absent, the recti, in contracting, move nearer to each other; but this, in our opinion, may also be the case when there is great elasticity of the cyst in partial adhesions, &c., so that this sign is of tolerably little value. Accordingly for the

decision of this point there remains nothing in general but the exploration to be made after partial opening of the abdomen.

The less compound cysts are generally more suitable for the operation: they usually have a pedicle more suitable for extirpation, are seldomer fixed by strong adhesions, and combined with no apparent cachexy, and their removal is generally easily made. When there is a suspicion that the tumour is mostly cancerous, the operation should be abandoned; while simple and compound cysts are the most suitable objects for operation.

4. In simple, or compound cysts nearly allied to the simple, an attempt should previously be made with tapping in all cases.

5. At the time when the extirpation is performed, the patient must be free from fever, and, if possible, afflicted with no other disease. In this respect, the internal sexual organs are to be examined with care, because it is frequently the case that ovarian diseases are combined with uterine.

§ LVII.

When the operation is decided upon, first of all the often-asked question, whether the abdomen is to be opened by the long or short incision, is to be answered. In the first case the abdominal coverings are so far separated

that the tumour can easily be removed in its totality; in the latter the tumour has been previously diminished by the evacuation of its fluid contents, and can then be drawn through a correspondingly small incision. In England, in particular, practitioners are divided into two parties, the one who defend the long, the other the short incision. *Clay* in particular advocates the former, and W. Jeafferson the latter. Both parties have presented favourable and unfavourable results; and from what can be gathered from the statistical tables, the long incision presents no very marked influence upon the issue of the operation. Accordingly we find ourselves obliged, in every special operation, to direct ourselves to the requirements named; but in cases where the evacuation of the cyst is easily practicable, to perform it previously, and to limit the length of the incision as much as possible. On the contrary, when the tumour is difficult to get at, we would not hesitate to enlarge the incision as much as required, by which the great evil is met, that great force is obliged to be used in tying the pedicle, and the operation is performed with less certainty. When the choice of time is permitted, it will be preferred, for easily-understood reasons, to operate at a favourable time of the year.

In most cases a preparatory treatment has been employed before the operation; that is, a careful diet, corresponding to the state of the individual, was ordered, gentle evacuation of the bowels insured, and the usual

course of the catamenial period awaited. The temperature of the operation room was generally kept somewhat higher, in order to moderate the influence of the external atmosphere upon the exposed peritoneal surface. Before the operation the evacuation of the bowels and bladder should be attended to.

It is most convenient to operate upon a small table, the patient lying upon the back, securing also the aid of three or four assistants.

We make the first incision through the skin in the course of the linea alba not longer than four or five inches between the navel and symphisis pubis, somewhat nearer to the latter. We cut down upon the peritoneum with uniform incisions, open it to the extent of three or four lines, and then introduce a warmed long metal sound between the anterior abdominal wall and the tumour in all directions, as deep as possible into the abdominal cavity, in order to ascertain the nature of the connection of the enlarged ovary with the surrounding parts. If numerous intimate adhesions are met with the operation is to be abandoned, the wound closed, or in a suitable case the incision made as described in the treatment of simple follicular degeneration. That procedure generally has no dangerous consequences. When the adhesions are not considerable, or when the tumour is free as far as it can be followed, the incision in the peritoneum is enlarged to four inches, and then the warmed hand is introduced into the abdominal cavity, in order to

make a careful examination of the relations of the tumour to the neighbouring organs, and also to perfect the diagnosis. For the latter purpose the hand is introduced into the pelvic cavity, in order to be certain that the disease is ovarian. Should any considerable obstacles arise to prevent the completion of the operation, it can be abandoned even now, and often without danger to the patient. When a correct diagnosis has previously been made that a simple cyst is free, the introduction of the hand into the abdominal cavity may be dispensed with, and the incision made somewhat smaller. If extirpation is resolved on, and the cystic formation prevails, the evacuation of the fluid contents of the cyst is now made. In cases where we have to do with cystoids which are composed of small cells, or with tumours which are for the most part solid, there is no possibility of any great diminution of the cyst, and the incision must be enlarged to a suitable size; and it is better to make it rather too large than too small. In the first case the evacuation must be made as quickly as possible, and for this purpose a canula two fingers wide is used. If the cyst be opened in a proper manner, it is emptied very much quicker than by a canula, but the patient is then unavoidably flooded by the streaming fluid.

When the evacuation is carried to such an extent as appears necessary, the trocar wound is closed by the fingers of an assistant and the whole tumour gradually drawn through the abdominal incision, in doing which the escape

of the bowels is to be avoided if possible. When the adhesions are slight they are to be cautiously separated by the hand; circumscribed intimate adhesions must be separated with the knife, the incised surface being always carefully examined as to its inclination to hæmorrhage. Frequently intimate adhesions with the omentum are met with, which must be treated as those last mentioned. We met with this obstacle twice in ovarian extirpations and once in a Cæsarian section. The tumour must be carefully supported, so that the traction on the pedicle be not too great; and in general the management of the latter requires great care. The pedicle which consists of the broad ligament and the fallopian tube of the same side, presents various breadths and lengths. The longer and thinner it is, the more favourable is the case. In our first operation we encountered this great evil—the pedicle was infiltrated close to the uterus with cancer, so that we were obliged to operate in diseased parts, and the hæmorrhage was very difficult to suppress. It is always advisable to pierce the pedicle in the centre, and ligature the two separated parts. In a very broad pedicle it is also advisable to pierce it twice and to apply three ligatures. If the ligature be simply tied around the pedicle it is very apt to become loosened, and to be followed by fatal hæmorrhage—this has happened in several instances. The ligature must always be strong and consist of many silk threads, for breakages have repeatedly taken place in tying it. The ligature is applied by a strong, curved needle

with an eye in the point, through which both ligatures are simultaneously drawn, and tied round both halves of the pedicle. This is then cut through between the ligature and the tumour, which is removed, and the incised surface of the pedicle carefully examined as to bleeding vessels.*

After the completion of this act of the operation, the abdominal and pelvic intestines are laid in their natural position as far as it is possible and necessary, their healthy condition is ascertained, and at all events the blood or other fluid discharged into the abdominal cavity is taken up with a soft sponge. The ends of the ligature are then brought out through the inferior angle of the wound, and must always be left very long, in order that they may not be drawn into the abdominal cavity by the meteorism which follows. We then proceed to unite the abdominal wound and to apply an external bandage, which is to be done in the usual manner.

Generally the after-treatment claims all the attention of the practitioner. In most cases a narcotic was administered immediately after the operation, generally morphia in a full dose, or it was found necessary in very exhausted patients to give analeptic remedies at the same time. Sickness, and pain at the place of ligature, are frequent and distressing occurrences soon after the operation. For

* Langenbeck fixes the remnant of the pedicle, some of whose vessels were tied in such a way in the abdominal incision that the wounded edges of the peritoneum which invest the pedicle, come into contact with the wounded edges of the peritoneum of the abdomen. He closes the abdominal wound by button sutures which do not injure the peritoneum, and are partly made through the pedicle.

these attacks morphia with opium clysters often produce the most beneficial results. The later sickness which is a common consequence of developed peritonitis, and is generally a very bad indication, resists all remedies as long as the peritoneal inflammation remains.

Almost all who died in consequence of the extirpation showed according to the duration of life more or less severe traces of an extensive inflammation of the peritoneum, and only in the rarest cases did death follow rapidly with the symptoms of exhaustion or hæmorrhage. In most cases therefore, when severe symptoms manifest themselves we have to deal with peritonitis. The treatment of this disease varied in different cases. In those instances in which the peritonitis continued within the limits of a circumscribed affection, an expectant and dietetic treatment not unfrequently sufficed; in more severe cases recovery took place after the use of local or general antiphlogistics, and at other times after a sedative and moderately derivative treatment, in some cases also after the use of mercury. These remedies were prescribed according to the idiosyncrasy of the patients, but it was only in the rarest cases that a rigorous antiphlogistic treatment was compatible with the condition of the patient's powers, usually a sedative with a moderately derivative method afforded the most beneficial results. When symptoms of extensive peritonitis set in with great exhaustion and considerable frequency of pulse, every treatment was in general ineffectual. Most patients died between the second and the sixth day

after the operation, and only a few survived the attack for several weeks or months, to succumb to consecutive diseases of which the most common were purulent and ichorous infiltrations. On the other hand, in a not inconsiderable number of cases recovery followed in a remarkably short time. The abdominal wound with the exception of the inferior angle generally healed in the course of from five to eight days, and after twelve or fourteen days all irritating symptoms generally disappeared. The ligature not unfrequently remained from four to seven weeks; after its separation the patient was generally restored to perfect health. Menstruation in several cases, in which only one ovary was removed returned regularly, and in some patients pregnancy also took place in the after course of life.*

* With respect to the management of the pedicle, Mr. E. W. Duffin, of London, was the first to suggest the advantage of securing the discharge of the slough from the pelvis through the external wound, by attaching the divided pedicle to the abdominal parietes by suture. Mr. D. has kindly favoured me with the particulars of his mode of procedure as embodied in the above, and adds, "I would now further propose to leave a sufficient length of pedicle for this purpose by the application of two ligatures, the first to the pedicle in the usual way and the second three or four inches from this, around the lower part of the sac, which has been previously emptied and washed out. This should then be brought through the external wound, and retained *in situ* by transfixing it with a large needle. This would obviate the dragging of the abdominal parietes to the spine, and holding them in this uncomfortable position until the ligatured part became detached."

Mr. T. Spencer Wells, at the present time, is the great exponent of the method of securing the pedicle external to the abdominal cavity, and by his enterprise and consummate skill in the after management of the operation generally has done much to relieve ovariotomy of some of its terrors. His success is the more remarkable, as, in several of his cases the disease was very far advanced, and in many, death was imminent; Mr. W. also has done much to ensure a successful termination in cases of ovarian excision, by the therapeutical measures he adopts subsequently to the operation.

Dr. Simpson has proposed acu-pressure as a means of securing the vessels of the pedicle, by pinning it to the abdominal parietes. Various objections offer them-

§ LVIII.

SOLID TUMOURS OF THE OVARIES.

a. HYPERTROPHY. b. ADIPOSE CYSTS. c. APOPLEXY. d. FIBROIDS. e. ENCHONDROMA AND FORMATION OF BONE. f. CANCER.

Although the tissue of solid tumours of the ovaries is of different kinds, and their rate of development and importance to the economy very various, still their diagnosis at the bedside cannot, for obvious reasons, be accomplished with certainty, as is attempted to be done, nor does it appear of such importance as at the dissecting table; and when we can determine their nature approximately during life, we are still obliged, first of all, to consider them as belonging to this class of diseases, from what is often their solitary, and only accessible, character, that is to say, their solidity. The following classification of solid tumours has this value, that we have excluded the whole series of fluctuating tumours, by which arrangement several essential points are presented in relation to their therapeutical treatment and prognosis.

selves to this suggestion being carried out in the manner proposed; but there is some hope that a modification of acu-pressure may yet be adopted which, if accomplished so as to obviate the risk of hæmorrhage, will be an admirable improvement and a great means of ensuring recovery from this formidable operation.—J. C.

§ LIX.

PATHOLOGICAL ANATOMY.

The following kinds of solid tumour have been observed in the ovary: a. *Simple hypertrophy* with more or less considerable change of texture. b. *Adipose cysts* with or without the formation of hair and bone. c. *Apoplexies.* d. *Fibroid tumours.* e. *Enchondroma* and *osseous tumours.* f. The *various cancerous formations.* Besides, several of the diseases previously mentioned present the characters of solid tumours in their first stage of development: for instance, the cystoid, the alveolar degeneration, and abscess; and therefore the series of solid tumours would be so comprehensive that almost the whole pathology of the ovaries would have to be repeated; it is to be observed, however, that in order to form the diagnosis with certainty, in such doubtful cases, it is indispensably necessary to observe the further progress of the disease.

§ LX.

a. SIMPLE HYPERTROPHY WITH THICKENING OF TISSUE

Is most frequently the result of an acute or chronic inflammation, and is caused by a more or less free fibrinous exudation into the parenchyma of the ovary; in the course of time this exudation becomes organized, and is eventually transformed into cellular tissue. From what we have observed, this affection never attains any great size; the largest simple induration we have met with was the size of a goose-egg. In ordinary cases, ovaries affected with this disease are not larger than a walnut. In several instances we have found this condition in both ovaries at the same time, most frequently as the result of puerperal inflammation. Indurations of still less degree also occur partially, but for obvious reasons they do not come into consideration here. In those cases in which the whole ovary is implicated, it is always found combined with complete atrophy of the follicles. The degree of hypertrophy of the tissue is various, and depends upon the duration and intensity of the affection. The participation of the peritoneal covering of the ovary in the process of disease is also very variable: in one case we saw two hypertrophied ovaries, of the size of a duck-egg, lie perfectly free in the pelvic cavity, while much smaller ovaries suffering from the same affection are

frequently found enclosed in a peritoneal exudation. These forms of disease often occur after delivery; and the ovaries, which are then situated in the superior pelvis, may be fixed there by adhesions, and thus remain displaced. On the other hand, free hypertrophied ovaries may become variously dislocated; in particular, they may glide into the space of *Douglas*.

It is an undoubted fact, that the ovaries in this form of ovarian disease are retrogressive, and they may be restored in time to their healthy condition.

§ LXI.

b. ADIPOSE CYSTS

Are frequently found in the ovaries, their size and variety of form being such as are met with in no other organ. They are developed in most cases from the Graafian follicles, which contain either adipose matter alone, or combined with other substances. In some cases, however, new adipose cysts are formed; at least we often observe a cyst containing fat interspersed amongst other formations.

In their simple form they present a perfectly-filled sac with tolerably thick walls, the contents of which are a homogeneous, whitish-yellow fatty mass. In this their simple form we have seen them of considerable size, as the only degeneration of the ovary, once as large as a

child's head, another time about that of an adult's. Their form is generally round, though they readily yield to pressure on their periphery, and often appear flattened. They seldom attain the size just mentioned, more frequently they are met with about the size of a walnut or a hen's egg; they are often complicated with other degenerations of the ovaries, so that in large cystoids, and even in alveolar degeneration, it is no rare occurrence for one or other of the cysts to contain fat. Some adipose cysts appear to become dropsical ultimately, and it sometimes happens that an adipose cyst forms a communication with a dropsical cyst by absorption of their walls. Under both circumstances we find the fat in the fluid of the cysts either as a deposit on the walls, or in variously formed masses often of a very uniform size and shape.

The formation of hair is a very frequent occurrence in adipose cysts, and is found either on the internal surface of the cysts or rooted in a capillary surface similar to the chorion, or lying free, collected into a lock of curls or intimately intermixed with the fat. The hair arising from the walls of the cyst is generally short, and is rather sparingly scattered over their surface like eyelashes; the free hairs, on the contrary, often fill the greater part of the cyst, in which case the quantity of fat may be very small. The longest and most delicate hairs are embedded in the fat itself, which they traverse in great numbers in a spiral direction, and they may grow to a length of from ten to twenty inches. Their colour does not always cor-

respond with that of the hair of the head. In one case observed by us there was an adipose mass as large as a fist, which was richly filled with long, dark hair, enclosed in a solid layer of fat 3‴ thick: this latter contained not one hair, so that they were perfectly isolated from the cyst walls.

The formation of teeth and bone is another frequent phenomenon in adipose cysts. Teeth occur more frequently than the latter, and their number is often astonishing. All kinds of teeth and in all stages of development have been met with; indeed they have been found in their germinal sacs, and also with and without fangs. They may either be firmly rooted in the cyst walls or detached, or in some cases inserted in a rudimentary formation of bone, generally without definite form, although they often present some resemblance to pieces of jaw-bone. Such curiosities have been published in great numbers: we will introduce only a few instances. Thus we find in the *Zeitschrift der Gesellschaft der Aerzte zu Wien* (*I Jahrgang Seite* 270) the following case of a cystoid tumour of the right ovary in an individual fifty-four years of age: "The right ovary was distended into a sac with fibrous coats, more than one inch in diameter, and separated into many divisions, some being of the size of a fist, others of the size of a man's head; and a great number as large as a walnut: the cavities contained a brownish, partly clear, partly turbid, reddish fluid mixed with blood, and a yellow, solid, adipose mass, was enclosed in a cyst the

size of a child's head. In this mass several balls about the size of a walnut, of blonde hair, from one to one and a half inches long were found on the internal surface of the cyst, besides six partly perfect, partly incomplete teeth, mostly incisors, were found in a groove; there also adhered a piece of bone, not dissimilar to an inferior maxilla, one inch long, half an inch thick, provided with three molar teeth, and invested by a membrane furnished with hair follicles and light downy hair. Besides several abscesses containing caseous pus were found in the cellular tissue connecting the cystoid to the abdominal walls, over the abscesses the general integument in the region of the navel appeared scurfed." In Meisner's *Diseases of Women*, vol. ii, p. 364, there is a remarkable preparation of this kind alluded to, which Blumenbach describes, and which is to be found in the *Gothaischen Kunstkammer:* "A girl, seventeen years of age, was attacked with a swelling of the left ovary, which after twenty-one years measured four ells in circumference and reached below the knee. After her death, which took place in her thirty-eighth year, it was found that the sac alone of the ovary weighed fourteen pounds, and contained forty pounds of a thick, adipose, honey-like mass, which was mixed with many hairs of different lengths, among which curls were found two inches long and as thick as a thumb, very like elf locks; the internal surface of the sac was set with short hairs. There were also found eight bony concretions of irregular shape, one of which was seven and another ten inches long,

and about two inches broad; the form of one of these bones was polygonal and set with six molar teeth and one incisor, and nine separate bones were present besides. The teeth had the size, perfectness, and firmness which they generally have in a girl twenty years of age." We saw an interesting preparation during our residence in Vienna in the winter of 1847. The description we take from a lecture of *Rokitansky's*, which was published in *Zeitschrift der Wiener Aerzte (III Jahrgang, XII Heft, pag. LIV)*. The preparation is a cyst the size of a child's head, developed in the right ovary, consisting of three compartments, and containing fat and hair; upon its internal surface were situated extensive islands furnished with a dermoid membrane set with hairs, with a panniculus adiposus, and with numerous glands, which secreted a large quantity of lardaceous matter. From one of these islands a cylindrical bony growth projected, two and a half inches long, and the same in thickness, somewhat curved at its extremity, pointed and enclosed in a general hairy integument, which consisted internally of a thin, compact lamellæ, of large-celled medullary diploë, and in its form might be compared to a finger. Its base was rounded off, and was fixed by means of some fibrous tissue to a flattened piece of bone, and possessed a certain degree of motion. This growth was supplied by a vascular and nervous twig, which proceeded from the wall of the cyst in the neighbourhood of its base; the former came from a considerable plexus apparently venous, the latter, a grey reddish trunk, about

half a line in diameter, from a collection of red-coloured ganglionic masses, which were enclosed in a capsule formed by the separation of the two lamellæ of the cyst wall. Each trunk entered the bony growth and was distributed as far as its point, similar to the nerves of the finger, giving off in its course several twigs to the general integument: no muscular fibres were discovered in it.

A case published by Schnabel (*Würtembergisches Correspondenzblatt* 1844, B. xiv, No. 10) is remarkable for the number of teeth found in it which exceeded one hundred, and also the number of separate fragments of bones, &c.

The origin of these different neoplasms has often been the subject of scientific discussion, and the belief was that the formation of bones and teeth must be explained by conception, and rudimentary fœtal formation; but many facts were also adduced against this assumption, so that the hypothesis is generally abandoned. The most essential of these facts are that we find similar neoplasms in other sacular tumours in the most different organs, and even in man, and immature women, although not in such quantity as in the ovaries; lastly, that the bones and teeth found in general belong to anything but fœtal forms, while fat, hair, and formation of bone belong to a similar process because they are always found in combination, and we are not obliged to explain the formation of simple adipose cysts as fœtal rudiments.

As regards the further behaviour of the adipose and

piliferous cysts, we have still to observe that like other cysts they are often the subject of spontaneous inflammation, which may lead to formation of pus and perforation of their walls and the adjoining structures by which the fat, hair, and bones, are discharged externally. This perforation has been most frequently observed in the anterior abdominal wall, in the bowels, and the bladder. In the last case, as is obvious, various derangements occur in the evacuation of the urine, in the formation of urinary deposits, and stony concretions in the bladder. In some cases these perforations were perfectly cured; in others, on the contrary, death was the result. The formation of fatty cysts often takes place in both ovaries at the same time.

§ LXII.

c. APOPLEXIES OF THE OVARY ARE EITHER PRIMARY OR SECONDARY.

In the first case during the catamenial congestion, a more or less considerable hæmorrhage takes place in a *Graafian* follicle, which may gradually increase to a considerable extent when a subsequent distension of the follicle takes place. It is also by no means rare to find after death, several follicles filled with blood; but usually the elements of the blood predominate in one of them. In the majority of instances such slight hæmorrhages

are absorbed, or remain without result; in some cases, however, the bleeding continues longer, or returns, and then the collection of blood sometimes reaches the size of a fist, or of a child's head.

The secondary hæmorrhages either originate spontaneously, or are the consequences of the operation of tapping. In the first place the hæmorrhage proceeds from the vascular walls, generally in cystoid formations, or in the cavities of sarcomatous degenerations, and in course of time it may be very considerable. After tapping, the hæmorrhage proceeds either from the walls of the wounded cyst at the time of the operation, or after inflammatory softening, and it may also be very considerable, even dangerous to life. The blood after remaining some time undergoes the usual metamorphosis, and forms according to the age of the hæmorrhage, various coloured and solid layers, or when it has been discharged in small quantity it is ultimately mixed with the contents of the cyst, which then becomes variously coloured.

§ LXIII.

d. FIBROUS TUMOURS OF THE OVARY

Occur in two forms: first as a round, solid fibroid; secondly, as a fibrous interstitial substance in the different kinds of cystoid formations. The first form is rather rare,

though we have met with it in two cases of considerable extent; in the one of the size of a child's head, in the other about as large as a small adult head. In the ovaries it presents the same peculiarities as in the fibroids of the uterus; only the neoplasms in the ovary cannot be isolated in the same way as in the uterus, but are intimately united with the investing tissue. In a case observed by us in the surgical clinique at Prague, partial decomposition of an ovarian fibroid was attended with a fatal issue. With the exception of this strange course, the fibroids in the ovary, like those in the uterus, are not in general apt to undergo a dangerous metamorphosis, and consequently this affection is not to be identified with scirrhus, as often used to be the case. After long duration, and particularly in old people, a partial or extensive ossification takes place in the ovaries in fibroid formations.

The second form is very often observed; indeed in large cystoids, and even in simple cysts, the lower part of the tumour usually consists of a fibrous mass of varying thickness, the tissue of which is dense at one time and flaccid at another: in the latter case it often encloses considerable cellular spaces, and thus forms an intermediate stage between the cysto-sarcoma already described.

The fibroid occurs in the ovary independently as well as in combination with other neoplasms, especially cancer, adipose cysts, &c.

§ LXIV.

e. ENCHONDROMA

Is still more rare than the round fibroid in the ovary. We exclude the formation of cartilaginous plates, which precede the various ossifications already mentioned in the ovary, and refer to those cases only observed by us of the deposition of cartilaginous concretions, without any other degeneration of the ovaries. We have seen it in two cases: once of considerable thickness, surrounding both ovaries in the form of large and small round plates and nodules in great numbers, in consequence of which they were enlarged to the size of a hen's egg, and presented quite a tuberose appearance; in another case, the whole right ovary formed a tumour of the size of a fist, enclosed in several false membranes, degenerated externally to rough, solid, cartilaginous granules, which presented internally the properties of a hyaline cartilaginous mass of less density.*

* [Dr. Scanzoni (*op. cit.*, p. 367) expresses some doubt of these cases being instances of enchondroma of the ovary. He says, "So far as is known to us these are the only records to be found in literature of the occurrence of enchondroma of the ovaries. The two preparations described by Kiwisch, are in the anatomical collection in Prague. One of these, that is the second described, we saw at the time it was removed from the body, and also repeatedly afterwards, but we cannot consider it an enchondroma but believe it to be a fibrous tumour, in the substance of which, consisting of cellular tissue, a new formation of cartilage, certainly a very rare occurrence, had taken place. But we regret that during our stay in Prague we did not avail ourselves of a careful examination of these preparations. However it is certain that the enchondroma, whenever it occurs in the ovaries, is one of the rarest forms of tumour to be observed there."—J. C.]

The formation of bone which stands next to enchondroma occurs in the ovaries in very different ways, and has been considered in several places. It takes place either as partial or total ossification of a cyst wall or of a fibroid, or as an osseous formation in adipose cysts. In the latter case, according to our observation, the formation of osseous laminæ may be so considerable that the smaller adipose cysts are entirely filled by it.

§ LXV.

CANCER OF THE OVARIES

Is one of the most difficult subjects for anatomical description, because it appears in such a variety of forms and is so changed by complications with other degenerations that it is ever presenting new appearances which cannot be included in a general description. The general characteristics of cancerous formations are however retained in all of them; that is to say, the well-known microscopical structure, particularly of the cell-constituents — the progressive endogenous development of the tissue thus produced — the ultimate disintegration — and the infiltration of the entire tissue of the organ and even of the adjoining structures.

Cancer is met with in the ovary as in the uterus in the *fibrous* and *medullary* forms. The fibrous is by

far the rarer form; in general it does not attain a very great size, so that it is mostly observed only about the size of a hen's egg or a fist, very seldom that of a child's head. We have seen it in aged persons only; but in some however it occurred as an independent primitive affection of one or both ovaries: in other cases it appeared as a secondary affection, together with a similar cancer in the uterus. In one case its parenchyma presented an intense leek-green colour.

Its internal structure does not essentially deviate from that of fibrous cancer in other organs; and, as the disease progresses, the tissue of the ovary is generally entirely lost in the new formation. Its external form generally presents undulating eminences which are usually much more considerable than in many forms of medullary cancer.

Fibrous cancer is in general slowly developed, hence it is not unfrequently found without peritoneal adhesions; and the degenerated ovary lies free in the pelvic cavity.

The *medullary* cancer occurs far more frequently than the foregoing kind, and passes through the most different degrees of form and thickness, which depend partly on the tissue which is the subject of it, and partly on its course of development. It may also be divided into *primary and secondary*. It happens also that cancer originates secondarily in an ovary otherwise degenerated, or is communicated from the adjoining organs to the ovary, while on the other hand the original degeneration may be cancerous.

In the first case simple or even compound cysts may receive cancerous deposits in their walls, which either present an uniform general infiltration, or are found embedded in the walls in the form of prominences or nodules; or they form nodes on the external surface, or project from the internal surface of the wall in the form of variously shaped excrescences. The latter often present themselves under the form of the *encephaloid* — they possess great delicacy of structure and considerable vascularity. They form sometimes clusters, at others racemose or variously shaped fungosities, most of them possessing a spongy arrangement of tissue. They are sometimes attached by a pedicle, sometimes they have a broad base, and they may increase so rapidly that they fill the whole cyst — indeed they sometimes break through one side and grow externally to the cyst. The external nodules, on the other hand, are more frequently solid, often as hard as cartilage, in colour white or red, generally from the size of a flattened pea to that of a hen's egg. However, as in cancerous formations in general, there are numerous rare deviations from this common form, to follow which were on the one hand too tedious, and on the other beyond our powers.

Medullary cancer is often combined with *the alveolar degeneration* of the ovary already described, so that the cellular spaces of the latter are more or less completely filled with medullary masses, partly spongy, partly solid, and not unfrequently external deposits of medullary laminæ

indistinct fibrous stroma, also surrounded by cells, and in other respects they were quite similar to the nuclei existing in the jelly.

When medullary cancer attacks the ovary primarily it always occurs, according to our observation, as infiltrated cancer, which penetrates the stroma more or less completely, and at length displaces it by endogenous and exogenous growth, so that ultimately nothing or only very little of the original tissue remains, and instead of the ovary we find a knotty tumour from the size of a hen's egg to that of a man's head.

In rare cases it is free from peritoneal adhesions, but more frequently it is intimately matted with the surrounding parts. According to the stage of development, it sometimes consists of solid, red, or whitish masses, often of a lard-like tissue, or of a substance softened in its centre into a cerebriform mass.

In some cases cancer extends from the ovary to the adjoining structures, particularly the peritoneum, uterus, tubes, vagina, rectum, bladder, and adjacent pelvic glands, with or without perceptible interruption. When softening has set in, it may lead to corrosion and perforation of several of these organs.

Primitive cancer of the ovaries is not unfrequently the only cancerous formation in the organism; as such it may continue for a long time, and attain an enormous size without causing further infection. We observed a tumour of this kind in a girl twenty-nine years of age,

which exceeded the size of a full pregnant uterus, and contained about thirty pounds of cancerous putrescent fluid in a medullary infiltration of a simple cyst more than an inch thick, while the external appearance of the patient did not betray cancerous cachexy, and the body was tolerably nourished. In other cases on the other hand, besides the ovarian cancer, we find cancerous deposits in distant organs also; thus we have seen them in the stomach, the lungs, and the chest. Nevertheless, when there is external cancer and a hard ovarian tumour coexisting, we can never with certainty affirm the latter to be cancerous without further observation.

It results from what has been said that as the development of cancer advances, a tumour which was hard at the commencement may ultimately be changed into an obscure fluctuating growth, and may easily lead to diagnostic mistakes.

The second form of secondary cancer of the adjoining structures, most frequently proceeds from primitive uterine cancer. Such a transplanted ovarian cancer is generally of less importance, for it generally does not occur until the cancerous deposit in the primarily affected organ has advanced very far, and has also involved the other adjacent structures more or less in the diseased process.

A further division of cancerous deposits would be useless, because they possess no well defined forms, and present numerous transitions between the different varieties. Respecting *melanosis of the ovaries*, which has been made

a separate form by English authors in particular, we would observe that as far as we know, this form has never been noticed primarily as pigmentary cancer in the ovaries, but only secondary when the disease was of great extent, and as such it was a disease of very little importance.

§ LXVI.

ETIOLOGY.

In the diagnosis of the various solid tumours of the ovaries we can avail ourselves very little of the etiology, because it presents no other peculiarities here than those which we have introduced in our general etiological observations. The most essential facts respecting the etiology of the forms of disease touched upon here, that have to be mentioned, are contained in the following paragraphs.

The simple hypertrophies of the ovaries which we have mentioned, are observed most frequently after delivery in consequence of chronic oophoritis on one or both sides, but in some cases they originate at the commencement of the climacteric period; and they are not unfrequently combined with similar uterine affections.

The adipose and piliferous cysts, with or without formations of bone and teeth, belong to those foreign

formations in the ovaries which occur in the earliest years of life; for several cases are known in which they were observed before puberty, in children from six to ten years of age. From this period to the greatest age, no part of life is exempt from their formation.

The apoplexies in their primary form specially occur in early life, and appear to be most frequently caused by severe catamenial congestion, and also by hyperæmia, produced by impediments to the course of the circulation. The secondary apoplexies, as we have already stated, are peculiar to the more developed forms of the cystoid and cysto-sarcomatous growths.

Fibroid and enchondroma occur more frequently in aged persons, although large soft fibroids in particular have been observed in some young individuals.

Cancer of the ovaries, also, with the exception of childhood, spares no period of life, and it is not rare in the prime of life, but medullary cancer occurs in young persons exclusively, particularly with alveolar softening of the tissue. The fibrous cancer on the other hand, belongs chiefly to the advanced periods of life. We have besides to observe, that ovarian cancer breaks out much earlier than uterine; for whilst in a great number of uterine cancers, we have as yet seen none developed before the age of twenty-four years, we have observed very extensive ovarian cancer in a girl of seventeen. However, the frequency of ovarian cancer compared with uterine, if we except the secondary forms which proceed from the

latter affection, is not so considerable; and according to our observations we may assume that of every five cases of primitive uterine cancer, there occurs one case of primitive ovarian cancer. But among the solid tumours, cancer and adipose cysts are the most frequently occurring forms of disease. It is however to be remarked that medullary cancer in all its stages occurs even in an advanced age.

As regards constitutional conditions, they afford no remarkable data respecting the origin of these tumours. Scrofula so often accused in the case of all solid tumours has the less claim to consideration, because, as we have already stated, the scrofulous, that is the tubercular deposits, in other organs have never been distinctly observed. It was only in cases, where the whole vicinity of the ovaries, particularly the tubes and peritoneum were quite filled with tubercles, that it appeared to us that some tuberculous granules were deposited in the ovaries also; but this phenomena appeared secondary.

Even cancer in many cases shows no recognisable peculiarities in the constitutional condition of the patients. At the commencement of the disease, particularly, the so-called cancerous cachexy cannot be demonstrated. The latter is not generally observed until, by the progress of the local disease, the mass of the blood has been more or less diminished, and the nervous system drawn into sympathy. But this may also take place in an equal degree in other quick-growing tumours. Accordingly when individuals

appear remarkably cachetic, while there is no considerable cancerous deposit, we must affirm from our own observations, this coincidence of symptoms to be accidental.

Respecting other etiological causes, we must refer to what we have previously stated.

§ LXVII.

SYMPTOMS AND DIAGNOSIS.

The peculiar nature of the tumours mentioned, seldom produces special symptoms; it is generally the mechanical conditions, the rapidity of development, and the coexisting symptoms, which constitute the form of disease. Thus cancerous, fibroid, and adipose cysts, are not remarkably different in their symptoms in many cases; indeed they sometimes cause no distressing attacks, at other times they are very severe and dangerous. The solid tumours share this changeableness of symptoms equally with most of the previously mentioned degenerations, so that under certain circumstances a simple cyst produces the same symptoms as the solid tumours immediately interesting us. As regards the symptoms and diagnosis, we must refer to our previous communications, so far as they are applicable; and we will only mention some peculiarities of those forms of disease.

The hypertrophy of the ovaries, which we have

mentioned, is frequently marked by general and local inflammatory symptoms, particularly when it is related to the puerperal period; they are often combined with peritonitis, and metritis, and their results. It scarcely ever leads to considerable enlargement of the ovaries; but may occasion some degree of swelling of the corresponding region from peritoneal exudation, and intumesence of the adjoining parts. In favourable cases the whole disease retrogrades, and perfect health is the result. When not in relation to the puerperal condition, the disease is accompanied by the symptoms of chronic inflammation with menstrual disturbance, or it causes no remarkable symptoms at all. When both sides are affected it leads to amenorrhœa and sterility. When we have diagnosed an ovarian disease by the means already described, we can only conclude that this form of hypertrophy is present, when we perceive a rather solid tumour of an uniform oval shape, which has originated with the symptoms detailed gradually retrograding.

The adipose cysts with their different kinds of contents in their simple form cause such symptoms only as proceed from their mechanical effects; these, it is obvious, are often very inconsiderable, at other times very important. They grow slowly, very seldom obtain a large size, and are generally free from peritoneal inflammatory attacks. But in some very rare cases they deviate from the common course, and become, as we have already stated, the seat of spontaneous inflammations and lead to perforation of the

adjacent structures, through which they often discharge their contents, and thus become perfectly amenable to diagnosis. These perforations in some cases lead to a perfect cure, but in others to death. Perforations of the bladder are most distressing and dangerous, because the lumps of fat and hair which find their way into the bladder cause considerable difficulty in micturition, the formation of urinary concretions, and great irritation in the urinary passages. Spontaneous ruptures of adipose cysts, as we have ourselves observed, may take place with the discharge of their contents into the abdominal cavity followed by peritonitis.

The diagnosis of the simple adipose cysts is generally difficult, so long as their contents are not evacuated; still, in cases in which the abdominal walls are thin and flaccid, and the tumour can be minutely felt, this form of disease may be conjectured when a uniformly smooth, moveable, particularly doughy tumour is felt, which is not painful, and makes slow progress in growth.

Of the apoplexies, it is to be observed that the secondary forms arising after puncture of the large cysts, are not amenable to diagnosis in cases where considerable hæmorrhage rapidly follows, which then shows itself by the symptoms of general anæmia, and by the rapid growth of the tumour; hæmorrhage also takes place after evacuation of the cyst. A remarkably rapid increase in the size of an ovarian tumour may depend upon spontaneous hæmorrhage into it; inconsiderable

spontaneous apoplexies which are gradually formed, are wholly beyond the reach of diagnosis. It is also to be observed, that in cases in which the blood is mixed with the serous contents of the cyst, the feeling of fluctuation may remain undisturbed. The same obtains at first after recent hæmorrhage, without intermixture of any fluid contents; on the other hand the older the apoplexy is, the more solid the tumour feels, although it always presents a doughy resistance.

The fibrous tumours of the ovaries, when they are easily accessible to examination, and are attached by a pedicle and moveable, may be detected with great probability by their uniform elasticity, their smooth surface, their moveability, and slow growth. The more spongy their tissue is the more easily do they simulate fluctuation, and so much more frequently do enlargements take place from an increased quantity of fluid, and with these changes there is an increased sensibility to the touch.

For the many varieties of cancer of the ovaries there are no certain marks. The irregular shape of the tumour may be looked upon as a very significant symptom, although it is also met with in small cystoids, while on the other hand secondary cancer developed in a cyst may present a perfectly uniform external surface. However sharply circumscribed the hard knots may be which are formed in other ovarian diseases, they must always excite a suspicion of extensively developed cancer. All solid, rapidly growing tumours, which drain the vegetative system, will also

excite anxiety as regards cancerous deposits, especially when they are accompanied with symptoms of hydræmia. Perforation of the adjacent structures with the external discharge of the cancerous putrilage, as must be obvious, furnishes the surest conclusion as to the nature of the ovarian disease; on the other hand we can draw no absolute conclusion, as we have already observed, respecting the nature of an ovarian malady, from the fact of cancerous deposits being present in the uterus or other adjoining structures. In other respects cancer of the ovaries presents no pathognomic signs—lancinating pains, and an apparent cachexy in particular, are not always peculiar to it, because their symptoms may be met with in tumours of a benignant character.

§ LXVIII.

PROGNOSIS.

With reference to the prognosis it would be of great importance to distinguish minutely the different solid tumours at the bedside, for while an extensive medullary cancer in general belongs to the certainly fatal diseases, patients die only very rarely from the consequences of the other solid tumours we have described; so that as regards them the prognosis must always be more favourable, even in cyst formations. The adipose cysts are attended by most

danger from ruptures and perforations taking place, and the fibroid in very isolated cases from putrescent decomposition, the secondary hæmorrhages from exhaustion. But since, as we have already stated, the diagnosis can seldom be made with great certainty, the greatest prudence is necessary in the prognosis; and we can only affirm in a general way, that in all the diseases mentioned, when they have attained a great size, complete retrogression which occurs only in inconsiderable hypertrophies and apoplexies can never take place. A not inconsiderable decrease in size may, however, take place in loose fibroids, and in large apoplectic cysts, while the adipose cysts and fibrous cancer may remain stationary for a long time, or continue in steady progress. It must not, however, remain unobserved, that all the tumours under consideration may become dangerous to life, as in the previously described ovarian tumours by recurring peritonitis, or symptoms of impaction, although they are very rare phenomena. It is obvious, therefore, that all these facts must have a different influence upon the prognosis when solid tumours, as is often the case, are complicated with other ovarian degenerations, in which case the latter not unfrequently decide the prognosis.

§ LXIX.

THERAPEUTICS.

The fewer the diagnosed facts are, so much the more scanty are the therapeutical results; but still we cannot affirm that all the solid tumours of the ovaries just described are inaccessible to treatment. Thus simple hypertrophies and slight apoplexies are subject to absorption and may then retrograde; and in this respect a treatment having absorption for its object may have the desired result. With this view an extensive series of remedies is recommended which may produce this design in different ways. The eccoprotic remedies, mercurials, iodine, mineral waters, baths, local derivatives, especially repeated bleedings from the cervix uteri, moderate antiphlogistics, and also grapes and whey, may be beneficial according to the peculiarity of the patient. The soft fibroids likewise require a similar treatment to produce absorption, by which their growth may be checked as much as possible. All therapeutical treatment is quite useless as regards the adipose cysts, the solid fibroids, and cancer. Nevertheless, the patients, on account of the moral impression they receive, as well as with the view of checking the development of the disease as far as possible, are to be subjected to a suitable dietetic treatment, and also to a very moderate derivative treatment which must be so suited to

the patient's strength, that no greater injury may be caused by it, than by allowing the disease to pursue its course undisturbed. We must never subject a patient suffering from extensively developed cancer and from hydræmia to mercurial or iodine remedies, nor must their digestive powers be impaired by the use of medicines.

As in the other forms of ovarian disease, so also in solid tumours; different distressing symptoms have not unfrequently to be first of all combated, particularly more or less severe attacks of pain caused by traction of the affected organ and the adjacent parts, peritonitis, persistent constipation, difficult micturition, &c.; for which the same treatment is to be employed as was given before. The symptoms which accompany the perforation of the adipose and cancerous tumours described are often the objects of medical treatment. In the adipose cysts the general and local inflammatory attacks claim the first attention of the physician; and, after perforation has taken place, the very difficult evacuation, which often happens especially in cases in which solid masses of fat, large convolutions of hair, and concretions of bone have to pass through a narrow, fistulous opening. In these cases an incision of the perforated place may be necessary, and, as we have already stated, may produce a perfectly satisfactory result. These happened even in some cases where the adipose and capillary cysts were evacuated into the bladder, which had to be opened with the knife; but, on the other hand, it must not be overlooked that this operation had

several unfavourable results, as was recently seen in a case communicated by *Ruge*.—(See *Transactions of the Obstetrical Society in Berlin; I. Jahrgang*, p. 172.)

In consequence of the incurable nature of the great majority of cases of solid tumours of the ovaries, the question here arises, whether extirpation might be employed. As regards this question we have to observe, that the simple forms of the tumours described, with the exception of medullary cancer, very seldom attain a large size and produce such distressing symptoms as to require the performance of the operation according to the principles previously laid down by us. As regards medullary cancer, we consider its extirpation in cases where its nature is known, to be unadvisable; and we have twice performed the operation for this disease with unfavourable results. It is certainly not to be doubted that, in several cases in which large compound tumours of the ovaries were removed with success, cancerous deposits were also present; but, as in most cases nothing has been known of the after-consequences of the operation, it still remains questionable whether or not the cancer has ultimately retrograded. Besides, we cannot always estimate, before the performance of the operation, how far the adjacent structures are free from cancerous infiltration; and in medullary cancer, especially, extensive adhesions may often render extirpation difficult.

§ LXX.

CONCLUDING OBSERVATIONS.

There are still to be considered the compound tumours; that is, those forms in which several of the local diseases of these organs are simultaneously combined with each other. But, in consequence of the variety of these compound forms, it appears impossible to bring these groups under a general point of view: and as regards the prognosis, diagnosis, and treatment of these forms of disease, nothing more important can be given than what has been introduced in the special consideration of the different diseases. Accordingly it is sufficient to repeat here what has been mentioned in several places, that the capability of combination in the ovarian diseases we have been describing is very considerable, so that not ouly a greater number of them may be combined, yet none excludes the other; but the limitation must not be overlooked, which depends upon the age and upon the peculiar phase of the sexual female life, this has also been considered in its proper place.

APPENDIX.

ON OVARIOTOMY.

In the following tables the details of those cases are given in which operative procedures were undertaken for the entire or partial excision of diseased ovaria, from the time of the first operation up to February, 1860, so far as I have been able to ascertain them.

In the first table are comprised those cases where one or both ovaries were removed, and the patient recovered from the operation.

In the second are included those cases where one or both ovaries were removed, but the patients died in consequence of the operation.

In the third table are comprehended those cases where the cyst was only partially excised.

In the fourth table the particulars of the *cases of attempted ovariotomy* are given, which are arranged in sections under the following titles:

a. Extra ovarian tumours only, removed.

b. Abandoned in consequence of adhesions.

c. Abandoned in consequence of the disease being extra-ovarian.

To show the results of ovariotomy, several tables and reports have been published by eminent practitioners at different periods, which are for the most part compilations from cases recorded in periodical literature. The first to which most authors on ovarian diseases refer, is one said to be published by Chereau, in France, many years ago. No tables, however, are contained in his work on ovarian diseases; M. Bauchet, in his essay on ovarian cysts, &c., refers to it as published in the *Journal des Conn. Med. Chirurg.*, 1844, which I have not been able to procure. The following is a list of all the published tables and reports on ovariotomy which have come within my knowledge; all of which, with the exception of Dr. McRuers, I have carefully examined:

Mr. B. Phillips, in the *Medico-Chirurg. Transactions*, London, June, 1844, p. 468.

Dr. Churchill's, in the *Dublin Journal of Med. Sciences*, July, 1844, and in "*Ashwell on Diseases of Women*," London, 1848, p. 688. The latter contains two additional cases.

Dr. Jeffreson's, in *London and Med. Gazette*, September, 1844.

Dr. W. L. Atlee's, in *American Journal of Medical Sciences*, April, 1845, p. 330.

Dr. Cormack's, in *London and Edinburgh Monthly Journal*, May, 1845.

Mr. T. S. Lee's, in his essay *On Tumours of the Uterus, &c.*, 1847, p. 264.

Dr. Clay's, "*Results of Ovariotomy*," Manchester, 1848.

Prof. F. A. Kiwisch's, *Klinische Vorträge*, *&c.*, Prag., 1856, p. 156.

Dr. Robert Lee's, "*On Ovarian and Uterine Diseases*," London, 1853, p. 88.

Dr. Focks', in "*Monatsschrift für Geburtskunde*," &c., May and June, Berlin, 1856, p. 370.

Dr. Lyman's, Prize Essay in the publications of the Massachusetts Medical Society, Boston, 1856, p. 36 and 96.

Dr. Simon's, in *Scanzoni's Beiträge zur Geburtskunde und Gynäkologie*, Wurzburg, 1858, p. 10.

Dr. Hamilton's "Report of cases occurring in Ohio," *Ohio Med. and Surg. Journal*, November 1859, p. 21.

Dr. Bradford's "Report of cases occurring in Kentucky," pamphlet.

Dr. Mc. Ruer's "Report of cases occurring in the State of Maine."

Mr. T. Spencer Wells', London, "Cases of Ovariotomy," *Dublin Quarterly Journal*, November, 1859, and pamphlet.

Dr. Otto V. Franques in *Scanzoni's Beiträge zur Geburtskunde und Gynäkologie*, Wurzburg, 1860, p. 211.

Of these Dr. Atlee's must be considered as the first extensive general table submitted to the profession. The late Mr. T. S. Lee evidently obtained the majority of the cases in his collection from that of Dr. Atlee. The late Professor Kiwisch, the author of the work now translated, apparently copied the late Mr. T. S. Lee's table into his

work, and added the additional cases which he had collected; neither author, however, adequately acknowledged the source whence they derived their cases. With respect to the late Mr. T. S. Lee, Dr. Atlee (in *American Journal of Med. Sciences*, April, 1850, p. 339) animadverts on the literary piracy in rather severe terms, alleging, as his principal annoyance, that his labours were unacknowledged, if known, by continental, and even by some American, writers, the credit being generally accorded to the late Mr. T. S. Lee. Drs. Hamilton and Lyman's Reports are of great merit, evincing extensive research and great care in their preparation. Undoubtedly Dr. Lyman's Report is the most extensive and accurate, and therefore the most generally useful of any that have been published. Dr. Hamilton's has obviously less pretentions, being only a report of the cases occurring in a particular state. Dr. R. Lee's is scanty in detail and contains many inaccuracies. Dr. Simon's is a very valuable collection and very reliable.

Several cases from the earlier tables have been rejected. My inquiry into many of these cases was mainly guided by a very elaborate review in the *British and Foreign Med. Chirurg. Review* for October, 1843. The following table exhibits the name of the operator, where recorded, and the reasons for rejecting the case.

TABLE OF REJECTED CASES.

Name of alleged operator.	Where recorded.	Reasons for rejection.
A. B.	Phillips', Kiwisch's, T. S., and R. Lee's tables.	Doubtful.
Ashwell.	Atlee's table.	Not to be found under the date given.
Anonymous.	Atlee's table.	Doubtful.
Bainbrigge.	Atlee's table.	Not a case of ovariotomy.
Barnes, A. B.	*Lancet*, vol. ii, 1858.	Never operated.
Chamberlain.	Dr. Hamilton's report.	Doubtful as to its being a case of ovariotomy.
Chrissmann.	Phillips', Jeaffreson's, T. S. Lee's, and Atlee's tables.	Undoubtedly the case refers to Chrysmar's.
C. D.	Phillips', Kiwisch's, T. S., and R. Lee's tables.	Doubtful.
Dieffenbach.	Atlee's tables.	Probably a repetition of the recorded case.
Dzondi.	T. S. Lee's and Kiwisch's tables.	Dolhoff reports that Dzondi never performed ovariotomy.
Erharstein.	Phillips', T. S. Lee's, and Kiwisch's tables.	Doubtful, see appendix to Dr. Simon's table.
E. F.	Phillips', T. S. Lee's, and Kiwisch's tables.	Doubtful.
Guy's Hospital.	Atlee's table.	Same as Morgan's case.
G. H.	Phillips', Kiwisch's, and T. S. and R. Lee's tables.	Doubtful.
Houston.	Atlee's table.	Not a case of ovariotomy.
Hopfer.	Phillips', Jeaffreson's, T. S. Lee's, Kiwisch's, and Atlee's tables.	Never operated; only reported Chrysmar's cases.
Macdonald.	Phillips', T. S. Lee's, Kiwisch's, and Atlee's tables.	Same as McDowell.
Simpson.	R. Lee's table.	No report or reply could be obtained from Dr. S. A celebrated Edinburgh physician states that the professor has operated.
Tueffard.	Atlee's table.	Not a case of ovariotomy.
Unknown.	One of the cases in Gooch.	Probably refers to Lizar's case, as the particulars correspond.
Unknown (four cases).	R. Lee's table.	Doubtful.
Mr. W. B-k-s-w.	T. S. Lee's & Kiwisch's tables.	Doubtful.
Woodward (two cases).	Dr. Lyman's report.	Doubtful as to being cases of ovariotomy.

TABLES CONTAINING THE DETAILS OF CASE
UNDERTAKEN FOR THEIR REMO

TABLE I.—SUCCESSFUL CAS

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
1.	About 1857.	Dr. H. A. Ackley, America.	Not given.	Duration, &c., not referred to in the report.	Not stated.	Free.	Not mentioned.	
2.	June 20th, 1863.	Dr. John L. Atlee, Lancaster, America.	23.	Unmarried. Tumour noticed seven years previously; tapped repeatedly; had ascites; two tumours detected in the abdomen, which were referred to the ovaries; much emaciated; rapid dissolution imminent; menstruation irregular for the last four years.	Not stated.	Nine inches, afterwards extended.	The right ovarian tumour was adherent to the anterior abdominal walls, and posteriorly in its whole extent to the pelvis. The left was unadherent.	M of ri w a
3	March 23rd, 1858.	Dr. John L. Atlee, Lancaster, America.	61.	Married at 23 years; never pregnant. Menstruation at 17 years, always profuse, ceased at 52 years. Health generally good. tapped four times previously; rapid sinking. After the last tapping, patient demanded the performance of the operation.	A mixture of æther and chloroform administered	One in. below the umbilicus to two in. above the pubes; afterwards enlarged an in. at each extremity.	Slight.	

SED OVARIA, AND OF THE OPERATIONS IE ABDOMINAL SECTION.

COMPLETED OVARIOTOMY.

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
e incision was made e abdominal parieties, became expelled du- roxysm of coughing. e was secured by liga- e tumour excised.	Not mentioned.	Not stated.	The patient recovered without an unfavourable symptom.	No account.	*Ohio Med. and Surgical Journal*, vol. xii, No. 2, 1859. Hamilton's Report.
lbs. of ascitic fluid were by a trocar previously ing the incision. In eparate the adhesions t ovarian tumour on part the wound was A firm band was met ining a large artery, to be secured; the achments posteriorly ive, and separated by ; the tumour was its bed and its pedicle ome difficulty pierced two portions; it was above and below the id the tumour excised. of the left ovary was tied in two portions, d without difficulty.	Pedicles of both tumours left within the abdominal cavity.	By seven hare-lip pins.	The patient did well from the first, and in a month Dr. Atlee ceased his visits. Last ligature came away on September 26.	She recovered completely.	*American Journal of Medical Sciences*, January, 1844.
ivided by the écraseur and a half minutes; closed for several mi- no hæmorrhage, nor of blood, could be de- o sickness.	Within the abdominal cavity.	Wound closed by four silver sutures and adhesive straps.	Three hours after the operation a "screwing" pain was felt on the left side. Catheter used; 18 oz. of acid urine drawn off: reaction subsided in about 20 hours; pulse intermittent on the 1st day; sutures removed on the 7th day; no discharge; the lint covering wound as clean as when first applied.	On the 14th day she rode half a mile, and since then has been quite well.	*North American Medico-Chirurgical Review*, 1858.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of incision	Adhesions.	N t
4.	March 15th, 1849.	Dr. W. L. Atlee, Philadelphia, America.	29.	Married; complete procidentia uteri; had four children. Tapped in January, 1849, but no fluid followed.	A mixture of one part chloroform and two parts æther used.	From symphysis pubis to middle of crest of ilium on right side, 17 in. long.	Firmly and extensively adherent to pelvis and iliac vessels of right side.	F o t w 8 lb pa m imb the and ac
5.	June 16th, 1849.	Dr. W. L. Atlee, Philadelphia, America.	25.	Unmarried; but has had an illegitimate child. Tapped one week before the operation, and four gallons of chocolate-coloured fluid removed; tumour noticed four years; since two years tumour rapidly enlarged; constipation; good deal of emaciation; heart and lungs healthy.	Anæsthesia induced by a mixture of chloroform and æther.	From two in. above the umbilicus to the pubis.	Extensively adherent to the omentum by its anterior surface.	Ur ovar w 4
6.	November 13th, 1850.	Dr. W. L. Atlee, Philadelphia, America.	28.	Married. Tapped sixteen times; she was in her second month of pregnancy at the time of the operation; reduced to a state of perfect emaciation.	Anæsthesia induced.	From midway between sternum and umbilicus to pubis.	Extensive.	in ovar w 8
7.	January 3rd, 1852.	Dr. W. L. Atlee, Philadelphia, America.	68.	Married. On account of the great age of the patient, the intense suffering, and rapid prostration, the operation was performed at the solicitation of the patient, only with the hope of arresting impending dissolution.	Anæsthesia induced.	Seven inches.	Adherent.	O cys w 2 ped va
8.	September 14th, 1853.	Dr. W. L. Atlee, Philadelphia, America.	56.	Married. Abdomen enormously distended, and a great sufferer; considerable peritoneal effusion. A rapidly fatal termination apprehended.	Anæsthesia induced.	From umbilicus to pubis.	Extensively adherent.	O cys pedi and T w 5

edings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
ture around the pedicle, consisted of the right Fallopian tube and broad ligament.	Not stated.	Not mentioned.	Ligature came away on the 19th day; recovery in about a month.	Still living, April, 1855. Patient has been twice pregnant since the operation, but abortion was induced in consequence of the dread of parturition.	*American Journal of Medical Sciences*, October, 1849, and April, 1855.
y of the adhesions required ılife to separate them; the as dragged out and adhesions ted during this process. Pe- rery vascular, vessels being d into two sets; it was d between the vessels and two portions; some hæmorr- occurred after the division pedicle; no vessels required e; after abdominal cavity onged, a tent was placed in ver part of the wound, from also the ligatures depended.	Not stated.	With eleven twisted sutures and adhesive straps.	A compress wrung out of tepid water was placed over the abdomen, over which a towel bandage was placed; ligature came away on the 36th day.	Married since the operation, and has given birth to two children, a boy and a girl. Period of gestation passed through easily, and labours speedy. Still living, April, 1855.	*American Journal of Medical Sciences*, April, 1850, and April, 1855.
ɔur removed.	Not stated.	Not mentioned.	Recovered.	The patient recovered from the operation. She could not be nourished in consequence of the irritability of the stomach dependent on the pregnancy, and she died 30 days afterwards from starvation. There was no abortion.	*American Journal of Medical Sciences*, April, 1855.
ɔur removed.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Sciences*, April, 1855.
ur removed.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Sciences*, April, 1855.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used. mode of administration and preparations employed	Length of the incision.	Adhesions.	Ni of tu
9.	September 21st, 1853.	Dr. W. L. Atlee, Philadelphia, America.	26.	Married. Much prostrated and suffered much; disease of six months duration, which progressed with great rapidity.	Anæsthesia induced.	From umbilicus to pubes.	Strong and extensive.	Ova cysti sever gang and fil pus. of tu upw 40
10.	April 17th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	36.	Married. Some peritoneal effusion.	Anæsthesia induced.	Five to six inches long.	None.	Ova cysti wei 15 lbs pec br and v
11.	September 5th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	52.	Married.	Anæsthesia induced.	Four to five inches long.	Slight.	Ova cysti wei 24 p
12.	October 19th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	24.	Married.	Anæsthesia induced.	From above the umbilicus to the pubes.	Slight.	Ova cysti wei 30
13.	December 16th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	49.	Unmarried.	Anæsthesia induced.	Five inches.	None.	Ova cyst wei 18
14.	1856.	Dr. Bardeleben, Greifswalde.	29.	Unmarried. Weakly; of pale aspect; disease had existed eight years. Emaciated and broken down by the long continued use of iodine. Severe pains; difficulty in defæcation and micturition. No fever.	Not stated.	Two inches long in linea alba.	None.	Simp rian incl diar with lin thic
15.	September, 1849.	Dr. Bayless, Kentucky, America.	31.	Married. Disease of seven years duration. Tapped seventeen times.	Not stated.	Ten inches.	Numerous, especially at the place where the puncture was made in tapping.	Multi wei 18

Proceedings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
Tumour removed.	Not stated.	Not mentioned.	Notwithstanding the condition of the abdomen there were strong hopes of recovery; wound had healed, the ligatures had come away, and patient sitting up.	Died in twenty-two days from gangrenous perforation of the jejunum. The opening was about an inch in diameter.	*American Journal of Medical Science* April, 18
Both ovaries removed.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Science* April, 18
Tumour removed.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Science* April, 18
Tumour removed.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Science* April, 18
Small intestines forced out and troublesome. The anæsthetic agent induced a cataleptic condition of the muscles, which extended to parietes of the abdomen.	Not stated.	Not mentioned.	Recovered.	Still living, April, 1855.	*American Journal of Medical Science* April, 18
Ligature, around the pedicle.	Pedicle was sewn into the wound.	The peritoneum was not included in the suture.	Moderate local inflammation. Cured in four weeks.	The patient is still healthy.	Scanzoni *Beiträge* Dr. Simo table fro *Dissertat on Ovar Cysts*, 18
Tumour removed. There was no distinct pedicle on either side to guide the operator in the application of the ligature.	Not stated.	Not mentioned.	The ligature came away at the end of eleventh month, and the patient recovered.	Not stated.	Dr. J. Bradfor Report Kentucl Americ 1859.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of adminstration and preparations employed	Length of the incision.	Adhesions.	
16.	December 4th, 1850.	Mr. J. Beale, Halesworth, Suffolk.	30.	Unmarried. Enlargement commenced December, 1849. Loss of strength; anorexia; emaciation; general health bad; suffered but little.	Chloroform administered	Four inches; afterwards enlarged to ten inches.	Adhesive bands on both sides of incision.	
17.	December 23rd, 1835.	Dr. Bellinger, America.	35.	Negress. One child, seven years ago, and many abortions since; menstruation regular; health good. Tumour of one year's duration.	Not mentioned.	From ensiform cartilage to pubes.	Not stated.	
18.	January 12th, 1856.	Dr. Ezra Bennett, America.	23.	Unmarried. Tumour noticed first two years ago; size of full term of pregnancy. Menses regular.	Not mentioned.	Three inches.	None.	
19.	July 3rd, 1857.	Dr. Hanford N. Bennett. Bridgeport, America.	24.	Unmarried. Menstruated regularly; complicated with ascites; in good general health. Tapped, and twelve pints of fluid evacuated.	Chloroform administered	From umbilicus to pubes.	None.	
20.	June 26th, 1843.	Dr. Frederick Bird, London.	35.	Married; had no children. Had occasional pains in right iliac region. At nineteen years of age, abdomen began to enlarge, for which she was treated and tapped during the following two years. Abdomen again enlarged at the end of fifteen months; was again tapped, and also on three subsequent occasions at intervals of twelve months. After the last operation had an inflammatory attack which slowly yielded to antiphlogistic remedies, and she had no return of the disease for seven years. Abdomen enlarged again during the next two years. She was tapped, for the tenth time, in January, 1843, and her general physical condition was becoming gradually worse; her spirits were depressed, and she was anxious to submit to any treatment for relief.	Not stated.	Exploratory incision was first made; afterwards enlaiged to four inches.	Slight.	

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
ons separated. Two cysts ıd and contents evacua- dicle pierced and tied in ions. No hæmorrhage.	Within.	Closed by seven interrupted sutures.	Went out January 11th. Morphia administered.	No account.	*Prov. Med. and Sur. Journal*, 1851, p. 397.
ır of right ovary removed,) large nutrient arteries h animal ligatures and . Uterus retroverted, and diseased that the finger ed its substance, and met which was introduced the vagina and os tincæ.	Not stated.	Not mentioned.	Recovered in a few weeks after enteritis from imprudence in diet.	Menses had not returned for the eleven years following the operation.	Dr. Lyman's Report, Prize Essay, Boston, America, 1856.
nptied, drawn out, and gature through pedicle.	Not stated.	Not mentioned.	Recovered without an unpleasant symptom.	No account.	Dr. Lyman's Report, Prize Essay, Boston, America, 1856.
ır slipped through the in- ithout difficulty. Double used.	Within.	Wound closed by four sutures, not including the peritoneum.	The ligatures came away on the fourteenth day, the wound being perfectly consolidated.	Five weeks afterwards walked two miles, and in perfect health.	*American Journal of Medical Sciences*, October, 1857.
ıt was seized with pronged ınd tapped. The pedicle ced and tied in two por- ıd a single ligature was include the pedicle below r two. There was a ten- faint, which was removed porting the scrobiculus	Within.	Wound united by a few interrupted sutures. Cold water dressing was applied, and a flannel bandage surrounded the abdomen. The ligatures were left hanging out of the wound.	Complained of faintness, for which a flannel bandage was placed round the lower part of the chest with benefit. Morphia and ice given. Sickness distressing and cough troublesome. On the 27th a fold of intestine was found lying on the abdomen, which was reduced with difficulty, and two additional sutures applied. On the 28th, catamenia appeared. On July 1, symptoms of collapse supervened, for which brandy and opium were used with benefit.	At the time of the report was in better health than she had been for years.	*London Medical Gazette*, August 18, 1843.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of t tum
21.	November 23rd, 1843.	Dr. F. Bird, London.	21.	Catamenial discharge appeared at sixteen years of age until two years ago, when it became suppressed: it afterwards returned, and about the time of its appearance abdominal enlargement noticed in the hypogastric region, which soon occupied the entire abdominal cavity. Emaciation, nervous depression, occasional vomiting, constipation, neuralgic pain in the left sciatic nerve. Operation readily agreed to.	Not stated.	Four inches and a half.	None.	Ovar cysto weigh 27 l
22.	January 28th, 1844.	Dr. F. Bird, London.	35.	Married; never had children. Suffered from menorrhagia and dysmenorrhœa. Tumour of six years duration. General health unimpaired until the commencement of the past year. Health much impaired with almost constant nausea and vomiting, obstinate diarrhœa, impeded respiration, and general emaciation. Fatal issue imminent.	Not stated.	Exploratory at first, but afterwards enlarged to four inches and a half.	Extensive but weak.	Cyst of right ov weigh 35 lb
23.	April 21st, 1844.	Dr. F. Bird, London.	21.	Unmarried. At eighteen years of age, through cold, the menstrual function was suppressed: the catamenia reappeared, but inflammation set in, followed by ovarian dropsy. The increase was so rapid that at the end of the year the tumour filled the abdominal cavity. She had the most judicious medical treatment, but it was of no avail. Slight œdema of the abdominal integuments, with tortuous and turgid veins. General health impaired, extreme emaciation, dyspnœa, and palpitation; intermittent pulse, with extreme mental depression.	Not stated.	Four inches.	None.	Multilo ovarian weigh 29 lb
24.	Not given.	Dr. F. Bird, London.	Not given.	H. T. Duration, &c., not referred to in the report.	Not stated	Not given.	To pelvis.	Ovarian mour of thickn

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
atory incision first made, esions being detected, the as enlarged to four and a es. Sac was then grasped ig pronged forceps, and evacuated by a trocar. cyst became emptied it from the wound. A was applied below the tube, which thus in- he principal artery; re- part of the attach- s pierced and tied in two and the tumour excised. the ligatures fixed at the rt of the wound.	Within.	By five interrupted sutures, but all strapping avoided: cold water dressing and a bandage applied.	Four hours after the operation reaction commenced; catheter used; morphia and ice given; food forbidden. One ligature came away on the 14th, and the other two on the 17th day after the operation, and her convalescence was speedy and uninterrupted.	No account.	*London Medical Gazette*, December 29th, 1843.
ning the peritoneum, the s also punctured. The s were cautiously sepa- The advantage of a small pparent, as from the dis- tate of the abdominal d the undiminished size umour, adhesions easily . Cyst punctured and by forceps through the The pedicle secured by atures surrounding it at places, and the tumour ised.	Not mentioned.	By several interrupted sutures and a thin roller of linen once round the abdomen.	Sedatives administered, and reaction established in the evening, and catheter used; convalescence proceeded rapidly and without interruption to the complete restoration of health. Ligatures were removed on the 26th day after the operation.	No account.	*London Medical Gazette*, March 22nd, 1844.
n as the cyst appeared it ped and punctured, and ntents escaped it emerged cavity of the abdomen. icle contained three ar- It was transfixed and ly in two portions and our excised. The liga- e carefully plaited toge- but a small portion of owed to recede into the .	Within.	Wound closed by several sutures and water dressing applied.	Liq. opii. sedat. administered, and on the 22nd a pillow moistened with the same was placed under her head, and appeared to produce calm sleep in half an hour; on the 23rd symptoms of local peritonitis appeared which were treated principally by morphia, after which she progressed most favourably.	On the 18th of June she was quite recovered; appeared in excellent health, and the menses returned.	*London Medical Gazette*, August 16th, 1844.
r removed.	Not stated.	Not mentioned.	Complete recovery.	No account.	*Lancet*, 1850, vol. ii, p. 592.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of tum
25.	Not given.	Dr. F. Bird, London.	Not given.	Mrs. H. Duration, &c., not mentioned in the report.	Not stated.	Not stated.	Not stated.	Two comp cysts volvin ovar
26.	Not given.	Dr. F. Bird, London.	Not given.	Miss K. No account given of the duration, &c.	Not stated.	Not stated.	Slight.	Lar ovarian
27.	Not given.	Dr. F. Bird, London.	Not given.	Not mentioned.	Not stated.	Not stated.	No account.	Lar ovarian with s pedi
28.	December 22nd, 1855.	Dr. G. C. Blackman, America.	Not given.	Had been tapped several times, the last occasion being five days before the operation, during which time the tumour had regained its usual dimensions; always suffered from nausea after tapping.	Not stated.	Not stated.	Slight.	Ovar cyst weigh 22 l
29.	August 5th, 1844.	Dr. J. D. Bowles, America.	25.	Married; had four children. Tumour noticed a year previously in the left iliac region; it steadily increased, and at the time of the operation had nearly reached the ensiform cartilage; the tumour could be felt through the vagina; pains in the bones and thighs; bodily functions performed generally in a healthy manner.	Not stated.	Nine inches in the linea alba.	In front to the omentum, uterus, and bladder.	Solid ria weigh 5 lbs. pedicle two in wide; it sels h and di ded. T tachme to the broad ment in of the l was d nose
30.	June 14th, 1853.	Dr. Bradford, America.	21.	Unmarried. Tumour of twelve years duration, having commenced at nine years of age, after scarlatina; menses appeared at twelve, and continued regular; had a variety of treatment; health failing.	Not stated.	From 18 to 20 inches.	To omentum.	Cyst of left ov weigh 41 lb attache inner were s plates of substa varyin size fro pin's he that o sauce

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
r removed.	Not mentioned.	Not described.	Complete recovery.	No account.	*Lancet*, vol. ii, 1850, p. 592.
r removed.	Not mentioned.	Not stated.	Complete recovery.	No account.	*Lancet*, vol. ii, 1850, p. 592.
r removed.	Not mentioned.	Not stated.	Complete recovery.	No account.	*Lancet*, vol. ii, 1850, p. 592.
hesions were easily sepa-	Within, but attached to the ligatures without the peritoneum.	Not stated.	No nausea; the incision healed kindly; no bad symptoms followed the operation.	"Three years after the operation the patient was in fine health."	*Ohio Med. and Sur. Journal*, vol. xii, No. 2, 1859. Hamilton's Report, also Dr. Lyman's Report.
ature was passed around le, which was then trans- a double ligature and wo portions.	Not mentioned.	Not stated.	Her health on the 13th day was better than before the operation; two months after the operation the wound had healed, except where the ligature came out. Recovery undoubted.	No account.	*Ohio Med. and Sur. Journal*, vol. xii, No. 2, 1859. From Hamilton's Report, also Dr. Lyman's Report.
apped, extracted, and igature passed through	Not mentioned.	Not stated.	Recovered. Was up on the 16th day, and the ligature came away in the sixth week.	No account.	Dr. Lyman's Report; Prize Essay, Boston, 1856.

No. of Case	Date of the operation	Name of the operator	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration, and preparations employed.	Length of the incision.	Adhesions.	Ni... of the...
21.	June 4th, 1856.	Dr. J. T. Hind, Bost, America.	28.	Unmarried. Menses regular; disease of thirteen months duration; progress rapid; never tapped.	Not stated.	Ten inches.	None.	Tum... vasc...
22.	March 29th, 1852.	Mr. I. Baker Brown, London.	26.	Married. In 1843 was tapped, and pressure applied, and no return of the fluid took place for seven years. In 1850 began to refill; a small trocar introduced, and an ounce of clear transparent slightly albuminous fluid drawn off.	Chloroform administered, from which she was a long time in recovering.	Four inches.	None.	Uni... ovari...
23.	March 2nd, 1854.	Mr. I. Baker Brown, London	37.	Mother of seven children; the youngest fourteen years old. Tumour of eight months duration; tapping, followed by pressure, was used; began to refill in four months.	Chloroform administered	Three inches.	None.	Uni... ovari...
24.	October 20th, 1858.	Mr. I. Baker Brown, London.	20.	Married; had no children. Tumour first noticed two years ago; had an attack of peritonitis in March, 1858, which occurred twice afterwards; menstruation irregular; much debility.	Chloroform administered	From umbilicus to the pubes.	Unimportant, situated low down, especially on the right side.	Mult... ovari...
25.	October 24th, 1858.	Mr. I. Baker Brown, London.	26.	Single. Morning nausea and sickness, and expectoration of blood without cough; general health appeared a good deal broken; tumour first noticed about sixteen months previously.	Chloroform administered	Four inches, afterwards enlarged.	None.	Mult... ovari...

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound if sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
vary was removed with ; the pedicle pierced and wo portions.	Not stated.	Not mentioned.	The ligature came away in the fourth week. Recovered.	Not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859, case 8.
determined to excise a of the cyst, but on a piece sected out the whole cut l freely, and it was then to extirpate as torsion arrest the hæmorrhage. an inch and a half broad ced and tied in two por- ine pints of fluid evacua- to the extirpation.	Within.	By three deep and three superficial sutures; not through the peritoneum.	Ligature came away on the 27th of April, on the 30th was convalescent.	Married on Oct. 2, 1853, & in June, 1854, is in the eighth month of pregnancy. January, 1860, is the mother of three healthy girls.	Brown on *Surgical Diseases of Women;* and kindly revised by the operator.
quantity of fluid in the the peritoneum. When emptied the cyst was well was seized with vulsellum nd punctured. While the as escaping the patient a little and expelled the hrough the orifice. The which was four inches by tied in two portions.	Pedicle tied to a director, and retained external to the abdominal cavity.	Five deep sutures and four or five superficial ones; not through the peritoneum.	Opium freely administered; bled once; the pedicle began to slough on the 5th; the ligature came away on the 15th.	In May is in perfect health, and still continues well; January, 1860, is perfectly well.	Brown on *Surgical Diseases of Women;* and kindly revised by the operator.
ns separated by the hand; ng; a large quantity of buminous fluid evacuated a large canula.	Secured at the lower end of the wound by callipers external to the abdominal cavity.	Iron wire sutures used; not through the peritoneum.	Opium freely used; sickness slight; catamenia appeared on 23rd; she went on well, without a single bad symptom.	In March, 1859, is in perfect health, has grown stout and ruddy; menstruates regularly. There is a vicarious discharge at each menstrual epoch from the part where the pedicle was secured.	*British Medical Journal*, May 28, 1859; and kindly revised by the operator.
unctured, but little fluid the walls of the mass , and broke down under ght pressure; the cyst it with much difficulty; ick and soft.	Retained at the lower end of the wound, and the callipers left on.	Iron wire sutures used; not through the peritoneum.	Sickness; opium freely administered; no untoward symptoms occurred, and in six weeks left her lodgings quite well.	In March, 1859, had grown stout and is in robust health.	*British Medical Journal*, May 28, 1859; and kindly revised by the operator.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Adhesions.	Nature of the tumour
36.	Feb. 25th, 1859.	Mr. I. Baker Brown, London.	45.	Married; mother of two children. Had lupus with osteo-sarcomatous swelling behind the clavicle, from which she got well. Soon after this a small tumour discovered in the recto-vaginal pouch—abdomen afterwards rapidly enlarged; was repeatedly tapped, from which she generally recovered speedily; latterly much emaciation, having a pale and unhealthy look.	Chloroform administered	Six inches.	Moderate of right ovarian tumour; left ovarian tumour adhesions very firm and intimate.	A multi lar cys each ov the left rian tu appear though layer of vic fa surroun
37.	December 5th, 1859.	Mr. I. Baker Brown, London.	Not given.	Unmarried. Had increased in size some time, but the attention had been specially directed to it only a few weeks, in consequence of frequent attacks of violent pain; had very rapidly filled for six weeks; an exploratory puncture was made on November 3rd, and the diagnosis being confirmed, she was immediately tapped through the vagina; she very rapidly filled again.	Chloroform administered	Four inches.	Slight.	Multilo ovarian the pe was br and sh
38.	April 14th, 1848.	Dr. P. J. Buckner, America.	32.	Married; had six children. Tumour noticed six years previously; first observed in the left iliac region, but afterwards appeared to occupy the right side; had two of her children during this period; in the absence of lactation and pregnancy, menstruated regularly; abdomen as large as at the full term of pregnancy; prolapse of the uterus.	Not stated.	From the umbilicus to the pubes, afterwards extended; making an incision of eleven inches.	Adherent from one semilunar line to the other, and from three in. above the umbilicus to within an in. of the pubes.	Multilo ovarian weigh 28½ l

gs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
varies removed; several fluid escaped on opening men; pedicle of tumour ovary was short, and plied; the tumour on the vas so adherent that some ihesions had to be separa- the écraseur; a strong l ligature was applied to cle, and fastened to the	Both pedicles were retained at the lower part of the wound without the abdominal cavity.	Iron wire sutures used; not through the peritoneum.	Clamp removed on the 7th day, from which time she steadily progressed, and on the 14th day was removed to the sofa.	March 16, 1859, eats, drinks, and sleeps well; wound is nearly healed. January, 1860, is stout and well.	*British Medical Journal*, June 4, 1859; and kindly revised by the operator
iesions were easily broken ie tumour was punctured, fluid being withdrawn, zed and drawn out, some sts from time to time nctured to lesson its bulk.	Retained without with callipers.	Iron wire sutures used, not passing through the peritoneum.	Three hours after the operation a good deal of pain came on, and the pulse was 110, hard, and wiry; bled to 12 oz., and took 5 grs. of calomel. She went on well until the 10th day, when there was an increase of pain, and on the 11th day a pint of pus suddenly escaped from the vagina, with immediate relief. There was a discharge for a few days, but she steadily recovered.	On January 21st, 1860, the patient had grown stout and had menstruated.	The particulars of this case kindly communicated by the operator to the reporter.
impossible to distinguish of adhesions; after the mptied the posterior fold hed up and found not to ent, this was drawn out ed; the hand was then rough to reach the lateral s, which were detached ft side; the adhesions on side were then separated, 1 great difficulty; the 1 was lacerated, and the age was so free as to re- igature. The operation an hour and a quarter rformance. The pedicle sfixed and tied in two	Not mentioned.	United by five interrupted sutures.	The ligature came away on the 34th day, and on the 1st of June could walk about. Her health and strength daily improved.	After the lapse of more than two years the patient was in good health and menstruated regularly.	*Ohio Med. and Sur. Journal*, vol. xii, No. 2, 1859, Hamilton's Report.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of t tum
39.	January 31st, 1850.	Dr. P. J. Buckner, America.	39.	Married; had several children. Tumour, felt through the abdomen, was elastic and moveable.	Not stated.	Eight inches.	Numerous.	Not st
40.	September 15th, 1846.	Mr. H. E. Burd, Salop.	25.	Married; had three children. Tumour noticed first soon after her confinement; a moveable tumour detected in the right side; an elastic bandage only treatment recommended; tumour of about 12½ months duration; abdomen much distended; dyspnœa urgent, unable to lie down; states menstruation to have been regular, last time six weeks ago; breasts flaccid, areola not darker than usual; os uteri could not be reached by the finger.	Not stated.	Exploratory first, but afterwards extended from pubes to within an inch and a half of ensiform cartilage.	None.	Mult ovarian with s solid m about 5 in wei
41.	June 25th, 1853.	Dr. Burnham, America.	42.	Unmarried. Tumour of six years duration; diagnosticated as belonging to the left ovary.	Not stated.	From two inches above the umbilicus to the pubes.	Not extensive.	Fibr pedicu tumo the l ova fibr tumo the l and c tumo right o The u was impact the pe
42.	March 28th, 1853.	Mr. G, B. Child, London.	33.	Married nine years, and a prostitute for six years before marriage. Had suffered from syphilis, and given birth to two premature children; swelling in left groin first noticed ten months ago, and has since increased rapidly.	Chloroform administered	Three inches.	Slight.	Multil cyst right o weig 7½ l

lings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
ions were divided with the pedicle was secured by a ligature surrounding it; the operation the bowels ed, and were returned with y; the tumour, which was ight ovary, was then ex-	Not stated.	Not mentioned.	The wound healed kindly, although the general symptoms at times were alarming; the ligature was removed 39 days after the operation, and the patient able to walk about the room.	Still living, and enjoying perfect health.	*Ohio Med. and Sur. Journal*, vol. xii, No. 2, 1859. Hamilton's Report.
argest cyst tapped, and ree gallons of fluid evacuhe tumour was then drawn and pedicle examined, was pierced and tied in ortions; difficult to tighten tures, the upper and outer pped, and a single ligature through the pedicle was he vessels were also singly d; uterus was found to be vid state.	Not stated.	A few interrupted sutures used, with plaster and bandages.	Tincture of opium administered; little sickness; on the 17th, in the morning, abortion took place, the fœtus was alive when born; the placenta was expelled about an hour afterwards; no hæmorrhage; opium freely administered; had tympanitis&hiccup. On Oct. 8 three ligatures came away and she left the hospital on Nov. 15.	On the 4th of April, 1848, gave birth to a fine male child, and was in the enjoyment of uninterrupted and unimpaired health.	*Medico-Chirurg. Transactions* vols. xxx and xxxii.
pediculated tumour was atured and removed; the rian tumour was then disfrom the broad ligament, rmatic vessels tied, and our excised; then the right sac, with its liquid conemoved; the uterus was ssected from its attachdown to the reflection of ina from the cervix and d also, the two uterine only requiring ligature.	Not stated.	Not stated.	After violent peritonitis, with offensive suppuration from the abdomen and vagina, the patient was out of danger, and able to be up in 35 days.	No account.	Dr. Lyman's Report, Prize Essay, Boston, 1856.
ok ox gall and had a warm ie day previous to the n. Temperature of room 65° *F.*, and steamed; she owed to suck ice. The s tapped and gradually through the incision; a yst was also tapped.	Within.	Three deep sutures passed close to but not through the peritoneum; also by superficial interrupted ones.	Was discharged on the 25th of April, cured. Pulse rose to 120; tenderness in the iliac region; opium freely administered; bronchial tubes loaded with mucus; pus freely escaped from incision.	Six years after was moderately stout and in perfect health; has menstruated regularly; has not been pregnant: scar then measured only 2½ inches.	*British Med. Journal*, Mar. 6, 1858; and *Med. Times and Gazette*, Dec. 18, 1858. And kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of incision.	Adhesions.	Nat of tum
43.	June, 1820.	Dr. Chrysmar, Jany in Wurtemburg.	38.	Married at 25 years and had five children. Had metritis after fourth confinement, from which she recovered in six weeks; she then had pain in left side, which disappeared during pregnancy; two years afterwards disease had extended over the abdomen; orthopnœa and œdema exceedingly distressing; great emaciation and extreme exhaustion, dissolution imminent.	Not used.	From ensiform cartilage to the pubes.	Posteriorly to the pelvis.	Fibro lar tu of th ovary cavi conta hone subst weig 8 l
44.	September 12th, 1842.	Dr. Clay, Manchester.	46.	Married; had eight children. Tumour noticed first nearly four years ago; abdomen much distended; menstruation regular; tumour filled the abdominal and pelvic cavities; bowels acted upon previously by the use of inspis. ox gall; much emaciation; iodine treatment tried but without benefit; patient urgent for the operation.	Not used.	From sternum to pubes	Slight.	Cysto so ova weig 17 lb
45.	October 7th, 1842.	Dr. Clay, Manchester.	57.	Married; had nine children. She was tapped and then an ovarian tumour detected; both dropsy and tumour noticed for the first time only ten months previously; ox gall administered.	Not used.	Ten inches.	Firm in every direction.	Cysto so ova wh empt its co weig nearly
46.	November 8th, 1842.	Dr. Clay, Manchester.	39.	Married; mother of three children. Tumour noticed about seven years previously for the first time; tapped three times; so large that the umbilicus nearly touched the knees; tall and emaciated; her health had been generally good; tapped five days before the operation: complicated with ascites.	Not used.	Large.	Numerous and extensive, almost to every part of the abdominal parietes.	Cysto so ova weig nearly

...s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of Information.
...s protruded, and it be-...essary to envelope them ..., wet napkin; adhesions ...separated; a double li-...plied, tumour detached ...res brought out at lower ...e wound; the operation ...arter of an hour; no ... accident happened in ...tion, which was well	Within.	United by ligatures.	Slight shivering and hiccup a few hours afterwards, which was relieved by laudanum and nitre emulsion. The reaction but slight, and patient went home quite well in six weeks.	Pregnancy sixteen months after the operation, and was well eight years afterwards.	*London Medical Gazette*, Feb. 28th, 1859, from Graefe's and Walther's Journal, s. 60.
... could not be reduced ...r, in consequence of its ...re: pedicle was secured ...ong ligature and cut ... but on account of its ... the ligature did not se-...vessels, which were tied ...; an extensive omental ...had to be dissected off, ... vessel ligatured: about ... blood was lost during ...tion.	Within.	By nine interrupted sutures, and adhesive straps.	Was bled to 16 oz., which produced sickness eight hours after the operation, and again in nineteen and a half hours to 8 oz. Catheter used, and enemas to move the bowels; an elastic tube introduce to relieve flatulence. On the 18th day she joined her family, and soon after was able to resume her duties.	No account.	*Results of Ovariotomy, &c.*, 1848, and *Edinburgh Medical and Surgical Journal*, 1844, p. 453.
... divided with difficulty, ...t of the flaccid state of ...men; adhesions could ...parated by the scalpel; ...ransfixed, tied in two ... and divided, in doing ... cyst was opened, from ...out four pints of fluid ... about 2 oz. of blood lost ...ration; ligatures brought ...he lower angle of the	Not stated.	By seven interrupted sutures, straps, &c.	Morphia administered; urine passed naturally; and by the 14th day was considered cured. No unfavourable symptoms occurred afterwards.	No account.	*Results of Ovariotomy, &c.*, 1848; and *Edinburgh Medical and Surgical Journal*, 1844, p. 455.
...on of the peritoneum, ... size of a crown-piece, ...ved during the operation; ...n removed, was larger ...w's stomach; some hæ-... during the operation.	Not stated.	Not mentioned.	Morphia administered; reaction established in 24 hours, at which time she was bled largely; catheter used: the ligature came away on the 18th day and she recovered rapidly.	Has continued to enjoy uninterrupted health since the operation. 1848.	*Results of Ovariotomy, &c.*, 1848; and *Edinburgh Medical and Surgical Journal*, 1844, p. 456.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nature of the tumour.
47.	November 16th, 1843.	Dr. Clay, Manchester.	40.	Married. Disease of ten or twelve years duration. Tapped three times, the last time two days before the operation. Abdomen much distended.	Not used.	About ten inches.	To the abdominal parietes in three places.	Cystic a solid ova weighi 16 lbs.
48.	August 21st, 1844.	Dr. Clay, Manchester.	22.	Ovarian disease of six years duration. Tapped six times, the last occasion a few days before the operation; catamenia regular; had been salivated, but without benefit, and determined to undergo the operation; never married, nor pregnant.	Not used.	Long.	Broad patch to parietes mid-way from the umbilicus to pubes.	Solid a cystic o right ova weighi 29 lbs. a 14 oz.
49.	January 21st, 1845.	Dr. Clay, Manchester.	35.	Unmarried. Had been tapped seven times, the last, four days previously; had an asthmatic cough of long standing; abdomen much distended. Disease of ten or twelve years duration.	Not used.	Fourteen inches.	None.	Ovaria cystic, solid; the fl contai about 3 in weig
50.	August 28th, 1845.	Dr. Clay, Manchester.	35.	Married ten years; never had any children, nor abortions; menstruation to within four years regular; tapped four times, the last being four days before the operation; patient very urgent for the latter to be undertaken.	Not used.	Not stated.	But few.	Cystic a solid of t right ova weighi 18 lbs.
51.	October 5th, 1845.	Dr. Clay, Manchester.	38.	Married; had not had any children. Disease of two and half years duration; menstruation regular until about four years ago, when it ceased. General health tolerably good. Ox gall given. Separate cysts tapped, and 40 lbs. of fluid removed; tapped on two other occasions also.	Not used.	Not given.	In two places to the abdominal parietes.	Ovarian cystic, a solid; weighi 14 lbs., e clusive of liquid ev cuated b tapping Two lar cysts.

of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
and solid mass were	Not stated.	Not mentioned.	Active inflammation set in, but was successfully combated, and eventually made a good recovery.	At this time (1848) is in very good health.	*Results of Ovariotomy, &c.*, 1848, p. 52.
removed; very little luring the operation.	Not stated.	Not mentioned.	On the 9th of September returned to her friends. The principal ligature came away on the twenty-third day after the operation.	Not stated.	*Results of Ovariotomy, &c.*, 1848, p. 26.
ac punctured and 6 lbs. acuated; and from its red some exertion to nour through the inci- nore than 2 oz. of blood the operation; liga- icle brought out at the e of the wound.	Within.	By nine interrupted sutures.	Reaction four hours afterwards. Ext. Hyoscy. given; catheter used. Went on well; and on the fifteenth day after the operation went to her home in Wales.	Not stated.	*Results of Ovariotomy, &c.*, 1848, p. 29.
ation was completed in utes.	Within.	By seven interrupted sutures.	Morphia administered; catheter used; sutures removed three days after the operation; discharge by the ligature at first serous and then purulent and offensive. The ligature came away on the 15th of September. Returned home on the 21st of the same month.	In 1848 is now stout and good looking, and menstruated regularly since the operation.	*Results of Ovariotomy, &c.*, 1848, p. 43.
s easily overcome. The is removed, the wound ., in less than twelve	Within the abdominal cavity.	By interrupted sutures.	On the 24th the ligature of the pedicle came away. No sickness; opium freely administered; made an excellent recovery; and returned home on the 30th.	Six months afterwards stouter than at any period of her life.	*Results of Ovariotomy, &c.*, 1848, p. 45.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of t tum
52.	January 14th, 1846.	Dr. Clay, Manchester.	51.	Married; had one child 22 years previously. Menstruation irregular; bowels generally confined; tumour observed for five or six years; abdominal pains frequent; abdomen much distended; digestion impaired; subject to leucorrhœa; never tapped until the 10th of January, 1846.	Not used.	About six inches.	None.	One l thick cyst o left o about in we
53.	March 12th, 1846.	Dr. Clay, Manchester.	45.	Married; never pregnant. Disease of twelve years duration; had never been tapped; menstruation irregular; abdomen much distended; thin, sallow, skin of a dirty yellow colour.	Not used.	From sternum to pubes.	Some present.	Solid right weigh 46 l
54.	July 12th, 1846.	Dr. Clay, Manchester.	32.	Married; had one child, seven years ago. Disease of four years duration; tapped five times; menses irregular for three years previous to the operation.	Not used.	Thirteen inches.	Not stated.	Cystic solid ov weigh 22 l
55.	1846.	Dr. Clay, Manchester.	27.	Unmarried.	Not stated.	Not given.	Not mentioned.	Ovar tumo weigh with conte 48 l
56.	1846.	Dr. Clay, Manchester.	37.	Married.	Not stated.	Not given.	Not mentioned.	Ovar tumo weigh 40 l
57.	June 2nd, 1847.	Dr. Clay, Manchester.	32.	Married; had four children. Tapped five days after her confinement, and 38 lbs. of fluid drawn off; again tapped, and 45lbs. of fluid escaped; complicated with ascites.	Not stated.	Not given.	None.	Solid o mass o 5 lbs., sac co ing 9 l flui
58.	1847.	Dr. Clay, Manchester.	25.	Married.	Not stated.	Not given.	Not mentioned.	Ovar tumo 40 lb weig

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
than 2 oz. of blood the operation. Tu- ved.	Not stated.	Not mentioned.	The patient recovered without an unpleasant symptom, and seventeen days after the operation was preparing to go to her home.	Not stated.	*Results of Ovariotomy, &c.*, 1848, p. 39.
moved with difficulty.	Not stated.	Not mentioned.	Peritonitis followed the operation, but she ultimately recovered.	Menstruation became regular, colour of skin improved, and has since (1848) enjoyed good health.	*Results of Ovariotomy, &c.*, 1848, p. 52.
emoved.	Not stated.	Not mentioned.	She recovered perfectly in less than five weeks.	Menstruation became regular, and now (1848) enjoys good health.	*Results of Ovariotomy, &c.*, 1848, p. 51.
emoved.	Not stated.	Not mentioned.	Recovered.	Has since married, and is now quite healthy.	*Results of Ovariotomy, &c.*, 1848, p. 55.
emoved.	Not stated.	Not mentioned.	Recovered slowly.	Now (1848) is enjoying remarkably good health.	*Results of Ovariotomy, &c.*, 1848, p. 55; and in Dr. R. Lee's Table, case 69.
emoved easily; occu- fifteen minutes.	Not stated.	Not mentioned.	Scarcely an unfavourable symptom was manifested during the whole treatment, and by the 3rd of July was so far recovered as to require only occasional attendance.	Pregnant five months afterwards; delivered of a dead fœtus, at seven months. Now quite well, and in better health than for many years previously	*Results of Ovariotomy, &c.*, 1848, p. 49.
emoved.	Not stated.	Not mentioned.	Recovered.	Now quite well (1848).	*Results of Ovariotomy, &c.*, 1848, p. 55; and in Dr. R. Lee's Table, case 64.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision	Adhesions.	
59.	March 15th, 1848.	Dr. Clay, Manchester.	51.	Married. Long standing, ovarian disease; tapped; ascites present.	First ovarian operation performed under the influence of chloroform.	Ten inches.	Four well organised of long standing, but not extensive.	w a m ov i
60.	1848.	Dr. Clay, Manchester.	40.	Married.	Chloroform administered	Not given.	Not mentioned.	O m i
61.	1848.	Dr. Clay, Manchester.	45.	Married.	Chloroform administered	Not given.	Not mentioned.	O m i
62.	1848.	Dr. Clay, Manchester.	47.	No account.	Chloroform administered	Not given.	Not mentioned.	O w
63.	1849.	Dr. Clay, Manchester.	33.	Married.	Chloroform administered	Not given.	Not mentioned.	O w
64.	1849.	Dr. Clay, Manchester.	32.	Unmarried.	Chloroform administered	Not given.	Not mentioned.	O m i
65.	1849.	Dr. Clay, Manchester.	48.	Married.	Chloroform administered	Not given.	Not mentioned.	O m i
66.	1850.	Dr. Clay, Manchester.	45.	Married.	Chloroform administered	Not given.	Not mentioned.	tu lbs
67.	1850.	Dr. Clay, Manchester.	38.	Married.	Chloroform administered	Not given.	Not mentioned.	tu si i
68.	October, 1850.	Dr. Clay, Manchester.	32.	Married; sterile.	Chloroform administered	Not given.	Not mentioned.	

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
removed.	Not stated.	Not mentioned.	Recovered.	In 1851, in good health.	Dr. R. Lee's Table, case 151.
removed.	Not stated.	Not mentioned.	Recovered.	In 1851, in good health.	Dr. R. Lee's Table, case 152.
removed in about twelve The second sac not account of its small	Not stated.	Not stated.	Four grains of solid opium were given after the operation. The wound discharged freely on the ninth day, and she made a good recovery.	On the 25th of May was convalescent.	*Edinburgh Medical and Surgical Journal*, 1857.
hesions generally separa- the hand, rarely with d. The cyst was punc- some cases before the f the tumour, after the o lessen the bulk. The as always pierced, and o or more portions, when for one ligature to se- ectually.	The pedicle is never left, *only the remains* of it, in the abdominal cavity. *That portion beyond the ligature remaining* is but its attachment to the uterus.	Always by interrupted sutures, adhesive straps, and bandages; but the sutures were not carried through the peritoneum.	Opium freely administered after the operation in all the cases. (The operator is of opinion that the successful issue of the operation depends as much on the watchful mode of the treatment afterwards, as upon the operation itself. — *Edinburgh Medical and Surgical Journal* for June, 1857.)	Of these cases of recovery and those which are detailed (65) *none* died within six years; about *fifty* are still living, and *eight* have since been pregnant, some of the patients having had three or four children. The first, and the worst, case operated upon, *died* only in 1859; the operation was performed in 1842.	The particulars of these cases kindly communicated by Dr. Clay to the reporter, Jan. 16, 1860.
mptied and extracted. dered, and tied in two After the division of essels had to be secured.	Within the abdominal cavity.	Wound united by six sutures.	By the 13th of April the wound was entirely healed. Discharged on the 27th, quite well.	Eight months afterwards patient in good health. — 1855, married, and has had a living child; labour natural.	*Provincial Medical and Surgical Journal*, 1850, p. 598; *Lancet*, 1850, p. 680; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N o tu
109.	April 22nd, 1854.	Dr. J. Craig, America.	26.	Married; had one child. Menses appeared at fifteen years; at sixteen they became suppressed from cold, and she was never afterwards regular. The disease was complicated with ascites, which disappeared several times under treatment; adhesions diagnosticated.	Not stated.	Tentative; three inches, afterwards extended to the scrobiculus cordis.	To omentum and small intestines.	Ov solid Sol weig lbs. visci mass floati On m pic e tion, bules lar c cho crys co
110.	1838.	Mr. Crisp, Harleston, Suffolk.	50.	Unmarried. Tapped twice; disease of twenty years duration.	Not used.	One inch.	Slight.	Mul ovari
111.	July 9th, 1849.	Mr. J. Crouch, Surrey.	24.	Unmarried; healthy. Disease commenced in 1847; in 1849 urgently requested the operation to be performed. Catamenia regular. Tapped once.	Chloroform not administered	Twelve inches	One anteriorly.	Co ovari and s mour
112.	September 26, 1850.	Mr. Day, Walsall.	42.	Married twenty-one years; had nine children. Disease first noticed two years and a half ago. Became pregnant and was safely delivered. Tapped August 30th, and five gallons of ascitic fluid drawn off. Dyspnœa; severe pain in the region of the liver and heart; diarrhœa constant; urgently demanded the operation.	Chloroform administered on cambric handkerchief.	Within a short distance of the ensiform cartilage, nearly to pubis.	None.	Fibi mou left

dings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
naking the incision ascitic escaped. The cyst was , but the contents found k to pass through the canula. ntents were evacuated and mour extracted. Pedicle , and tied in two portions.	Not stated.	Not mentioned.	Recovered in seven weeks.	Four months afterwards was perfectly well.	Dr. Lyman's Report; Prize Essay, 1856, p. 53.
mptied, and drawn through ision.	Within.	Sutures not carried through the peritoneum.	Recovered.	This patient lived 15 years after the operation, and had very good health.	Kindly communicated by G. E. Jeaffreson, Esq., Framlingham, who obtained the particulars from his father. Owing to illness his father was unable to write. Also, *Lancet*, 1839 and 1840, vol. i, p. 287.
al cysts tapped. Adhesions by a blunt bone knife. pierced and tied in four No blood lost in the ope-	Pedicle thick as a middle-sized finger, left within the abdominal cavity.	Wound closed by five interrupted sutures.	Wound closed on the 16th of August. Opiates freely administered.	Married in 1850; had two children, and pregnant with a third. — *British Medical Journal*, Feb. 26, 1859.	*Provincial Medical and Surgical Journal*, 1849, p. 477; and kindly revised by the operator.
ped at the time of the operadirector passed through the made by the trocar, and inal cavity laid open to the of five inches; the incision ards extended; pedicle three wide tied by double ligature.	Within the abdominal cavity.	Sutures carried through the peritoneum.	Recovery slow and for some time doubtful; diarrhœa; sickness; aphthous condition of mouth and fauces. First ligature came away on the 12th, and the second on the 15th day; down stairs on 28th day, and hearty.	Eventually recovered her health and strength, and remains well. Has not been pregnant since. January, 1860.	*Provincial Medical and Surgical Journal*, 1851, p. 440; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Mode of uniting wound If sutures carried through peritoneum.	Length of the incision.	Adhesions.	Nat of t tum
143.	August, 22nd, 1845.	Mr. J. Dickson, Shrewsbury.	18.	Unmarried. Tumour first noticed twenty months ago, and gradually increased; no fluctuation could be detected; general health good; menses regular; slight emaciation previous to the operation; scanty secretion of urine; tapped, and about a quart of fluid evacuated, which afforded some relief.	Not stated.	Three, afterwards enlarged to fourteen inches.	Extensive.	Multil cyst o right weigl 28
144.	August, 27th, 1850.	E. Duffin, Esq., London.	38.	Seven or eight months duration; general health good; neuralgic pains in the right thigh; patient urgent for the operation.	Chloroform administered	Three inches between the umbilicus and pubis.	None.	Comp cyst o divisi the left cont 120 turbid
145.	June 10th, 1850.	Dr. A. Dunlap, America.	35.	Married; had six children. Menses ceased four months previously; pain in the back; abdominal tenderness, and uterine hæmorrhage; tumour of six months duration.	Not stated.	Eleven inches.	Extensive, but not firm.	Ova cyst
146	March 24th, 1853.	Dr. A. Dunlap, America.	37.	Married; had five children. Tapped for ascites four times; tumour discovered after the second tapping; much emaciation; mostly confined to bed; abdomen enormously distended.	Not stated.	Nearly twelve inches.	Slight.	Cystoi left o weig 37
147.	May 17th, 1853.	Dr. A. Dunlap, America.	46.	Married. Had ceased to menstruate six years previously; tumour first noticed three years ago, which gradually enlarged until it filled the abdomen; much emaciated; general health good.	Not stated.	Ten inches.	Slight to omentum.	Multi of th ovary, ing 3

ıgs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
artery was particularly e adhesions were readily d with the finger; the cyst punctured, but little fluid the pedicle was pierced in two portions.	Not stated.	By thirteen interrupted sutures, adhesive straps and bandage.	Morphia administered, and catheter used; some vomiting; the ligature of the pedicle came away in three weeks, and she recovered without an unfavourable symptom, being able to walk about.	Not stated.	*Provincial Medical and Surgical Journal*, October 1st, 1845.
tapped, and extracted the incision; pedicle was ınd tied in two portions s one surrounding it.	Pedicle drawn through, and attached by sutures to the parietes of the abdomen, but not so as to pierce the peritoneum.	Wound united by sutures.	The ligatures of tumour and slough came away through wound in abdomen on the 15th, and the wound was healed on the 22nd day; opium administered for six days largely.	Recovery complete, and able to resume her occupation.	*Provincial Medical and Surgical Journal*, 1851, p. 23; and kindly revised by the operator.
ions easily separated; tunctured; pedicle pierced in two portions.	Not stated.	By five interrupted sutures, and adhesive straps.	Great prostration; reaction not fully established for two days; on the 16th day free discharge from vagina and from the abdominal wound; the ligatures came away on the 31st and 34th days respectively; in six weeks was able to be on her feet.	The patient has since given birth to two children.	*Ohio Medical and Surgical Journal*, vol. 12, No. 2, 1859; Hamilton's Report.
ions easily broken up by d excepting where the had taken place in tapn the knife was required; le was transfixed and tied ortions.	Not stated.	Not mentioned.	On the 13th day the patient could walk across the room with assistance; ligatures came away on the 20th day, and could then walk without aid.	No account.	*Ohio Medical and Surgical Journal*, vol. 12, No. 2, 1859; Hamilton's Report.
ft ovary was removed.	Not stated.	Not mentioned.	Bowels moved by medicine on the 3rd day; a sanguineous discharge from the vagina appeared on the 3rd day; she was able to be up on the 14th, and the ligatures came away on the 27th day after the operation.	The patient has since enjoyed uninterrupted health, and is more fleshy than before.	*Ohio Medical and Surgical Journal*, vol. 12, No. 2, 1859; Hamilton's Report.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used mode of administration and preparations employed	Length of incision.	Adhesions.	Na of tun
148.	November 15th, 1855.	Dr. A. Dunlap, America.	Not given.	Married.	Not stated.	Not given.	Not mentioned.	Mult ovari 60 l we
149.	1856.	Dr. A. Dunlap, America.	Not given.	Unmarried. (Miss M.)	Not stated.	Not given.	Not mentioned.	Mult ovari wei 24
150.	1856.	Dr. A. Dunlap, America.	Not given.	Married; nine months previously Dr. Kimball made an opening, six inches in length, into the abdominal parietes, and abandoned the operation.	Not stated.	Not given.	Not mentioned.	Mult ovari wei 32
151.	1856.	Dr. A. Dunlap, America.	Not given.	Married. (Mrs. W.)	Not stated.	Not given.	Not mentioned.	Mult ovari wei 33
152.	April 3rd, 1849.	Dr. Elkington, Birmingham.	31.	Married fifteen months; tapped February 28th, and about five gallons of fluid drawn off.	Chloroform used with a handkerchief.	From 10 to 12 inches.	None.	Mult ovari wei 45
153.	1815.	Dr. Emiliani.	26.	No account.	Not stated.	Not given.	With the colon.	Scir ovari witl whic tainec scen

dings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
our removed.	Not stated.	Not mentioned.	Seventeenth day doing well, and recovered.	No account.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
our removed.	Not stated.	Not mentioned.	Recovered.	No account.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
our removed.	Not stated.	Not mentioned.	Recovered.	No account.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
our removed.	Not stated.	Not mentioned.	Recovered.	No account.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
of the cysts were emptied s to extirpation, on ac- of the large size of the . Pedicle pierced and tied portions.	Within the abdominal cavity.	Not stated.	The first ligature came away on the 12th, and the second on the 21st day. Recovery complete, and continues well.	April, 1851, safely confined. 1859, continues well, has had three children.	*Provincial Medical and Surgical Journal*, 1851, p. 439; and kindly revised by the operator.
our removed.	Not stated.	Not mentioned.	On the eleventh day the feverish reaction subsided.	After the operation several regular births followed, and in 1843, the patient was still quite well.	*Schmidt's Jahrb.*, B. 45, H. i.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N of tu
154.	1853.	Mr. Erichsen, London.	65.	No account.	Chloroform administered	Five inches.	Slight, anteriorly to the parietes.	Tum the ov
155.	Not given.	Dr. A. Evans, America.	Not given.	No account.	Not stated.	Not given.	Not mentioned.	men
156.	August, 1850.	Dr. John Farrell, America.	28.	Married; had five children. Tumour first noticed four years previously.	Not stated.	Ten inches.	Not mentioned.	Con of th ov
157.	October 30th, 1856.	Dr. George Fries, America.	51.	Married; had several children. Menstruated regularly, and had always enjoyed good health. Tumour noticed eight years previously for the first time; has increased rapidly during the past year; suffered from the distension only. Tumour moveable.	Not stated.	Three inches.	Not mentioned.	Ov cy

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
apped after the incision. ad and short pedicle was reed by a double ligature in two portions, the peri- being first carefully dis- om off the pedicle. The was then excised about nch above the ligature.	The ligatures of the pedicle were firmly twisted around the hare-lip pins so that the cut stump projected out of the abdomen between the lowest pin and the lowest angle of the wound.	By interrupted sutures closely applied, and two hare-lip pins at the lower part of the incision, adhesive straps, and a bandage.	The patient left her bed on the sixteenth day. Opiates were freely administered and catheter used.	No account.	*Lancet*, London, vol. ii, 1853.
ur removed.	Not stated.	Not mentioned.	Recovered.	Not given.	Dr. J. T. Bradford's Report, Kentucky, America, 1859; case 15, without further particulars, but not previously published.
ur removed.	Not stated.	Not mentioned.	The ligature came away on the thirty-second day: the patient recovered after severe peritonitis and a slow closure of the wound by granulation.	Menstruated regularly after the operation, but up to 1854 had not had any children.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
mour was punctured and of fluid evacuated. The withdrawn and the pedicle ; a large darning needle sed through the pedicle ely just interior to the and exterior to the for the purpose of pro- adhesions between the and the edges of the	Not stated.	Not mentioned.	Opium administered: she took 24 grains on the first day, 15 on the second, and 10 on the third day. Croton oil and turpentine administered to act on the bowels on the fourth day. The ligature came away on the fourteenth day.	The patient is now in excellent health.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of t tum
158.	April 25th, 1855.	Mr. Seaman Garrard, Halesworth, Suffolk.	20.	Disease had existed seven months, occasionally accompanied with severe pain in the upper part of the right side of the abdomen; with this exception her condition prior to the operation was good; she was active and in good spirits.	Chloroform administered on a sponge.	Four inches *i.e.* from the umbilicus to the pubes; rather more when the body was distended.	Firm and numerous with the abdominal integuments.	A bi ovari conti 22 p of fl
159.	October 18th, 1858.	Dr. J. W. Hamilton, Columbus, America.	25.	Unmarried. Tumour observed in February, 1857, for the first time; had severe neuralgia; had scarlatina in May, 1858; had rigors in September; menstruation ceased in February, 1858; morphia taken constantly to procure rest; constant vomiting after a meal; appetite bad; emaciation great; urinary secretion scanty; uterus retroverted; abdomen greatly distended; the case expected to terminate fatally at an early period. Patient decided promptly for having the operation performed.	Chloroform administered	Exploratory at first, afterwards enlarged to ten inches.	Extensive to the omentum; anteriorly, and difficult to separate; and extensive to the pelvis and ovaries.	Ova cyst wit sub- capal holdin

ngs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
ns separated by the hand. d in the situation of the he right side so firm as to division with the knife. yst required separate s.	Pedicle secured by a single silk ligature, left within the abdominal cavity; ends of the ligature brought out at the lower extremity of the wound.	By silk ligatures; peritoneum carefully avoided and was untouched.	Reaction slight; recovered in eight weeks; wound healed, and patient up and about in three weeks; ligature of pedicle came away in five weeks, but no inconvenience from it; the first four days kept slightly under the influence of morphia, and during this period had nothing but cold water; solids on the 4th day and then gradually her usual diet; bowels relieved on the 7th day by injections; bladder emptied night and morning for the first two days by the catheter.	Good; has been and is up to the present time actively engaged as a domestic servant.	Kindly communicated by the operator, also in *Lancet*. vol. ii, 1855.
unctured, and 24 pints of neuated. The bladder to identify; it was only it by observing that the f lymph as they were off passed between this d the cyst. Great vascu- the adhesions, and free age in detaching them. esions separated without of the scalpel, but with fficulty. The adhesions to treated as pedicles, and tured. Ligatures attached e needle hare-lip fashion, ansfixed the walls of the	Within.	By interrupted sutures, adhesive straps, &c.	Reaction not fairly established for 24 hours; vomiting constant; wound had healed, except at its lower part, in four days; free discharge from the lower part of the wound; severe hiccough; morphia freely given; ligatures came away on the 10th and 15th of November; wound remained unclosed for seve- weeks, through which several oz. of pus escaped daily.	In September, 1859, had recovered and enjoyed very fair health.	*Ohio Medical and Surgical Journal*, vol. xi, No. 3, 1859.

No. of case	Date of the operation	Name of the operator.	Age of the patient	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Na of tum
160.	April 20th, 1859.	Dr. J. W. Hamilton, Columbus, America.	24.	Unmarried. Tumour noticed about a year previously; abdomen became distended very rapidly; tapping performed on two occasions; after each tapping an apparent solid mass remained; slightly scrofulous; emaciated; menstruation regular; apart from the inconvenience caused by the tumour, she was in very fair general health.	Anæsthesia induced.	About 8½ inches corresponding to the inner margin of the right rectus muscle.	Adhesions.	Multi ovaria weig 30
161.	1859.	Dr. J. W. Hamilton, Columbus, America.	47.	Married. Mother of nine children; tumour noticed about two years previously; the abdomen rapidly enlarged, ascites supposed to be the cause; tapped twice, and a small quantity of fluid only discharged each time; strength and digestion impaired; great emaciation; unable to maintain the erect posture for more than a few minutes, could walk only for a short time with great difficulty; diagnostic tapping performed, after which several cysts were ruptured by a director; menstruation had ceased; disease approaching a fatal termination.	Anæsthesia induced.	Exploratory at first, afterwards several inches above umbilicus and again to the ensiform cartilage to the pubis.	Firm adhesions anteriorly to the omentum colon and parietal peritoneum.	Mul ovaria the sol fluid c weig 60
162.	October 30th, 1859.	Mr. Philip H. Harper, London.	32.	Had uneasiness about the pelvis many years ago, when it was diagnosed that she had incipient ovarian dropsy; did not begin to enlarge perceptibly until a year ago; distension very great in August, 1859, and 20 pints of albuminous fluid were removed by tapping; in eight weeks she refilled, and 14 pints were again removed; in four weeks more 14 pints were taken away, and 12 oz. of tinct. iodine of the Edinburgh Pharmacopœia injected; she soon recovered from this, but began to fill again in a week; she had wasted very much, and had every few days severe attacks of pain in the abdomen, with the usual symptoms of slight peritonitis.	Chloroform.	Six inches.	Very strong.	Multil in man of the ws collec of vary size 1 to

gs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
could not be recognised as punctured and a large of clear ascitic fluid from the larger cyst. cysts punctured, and -solid contents scooped hesions easily separated hand. Pedicle of the thumb, transfixed and o portions.	Not stated.	By seven or eight interrupted sutures, carried close to but not through the peritoneum.	The wound healed but became again separated through its whole extent. In five weeks had healed, excepting an inch; a fœcal fistula formed; evacuations not suspended per anum.	On July 13th, the patient was rapidly recovering, with still some fœcal discharge through the fistula.	*Ohio Medical and Surgical Journal*, vol. xii, No. 1, 1859.
he serous effusion the t its lower part was 3½ thickness. The cysts sed as fast as they could d; a single cyst occupied with moderate attach- dhesions separated with Pedicle was transfixed l tied in a corresponding f portions in consequence readth of the pedicle. le could not be brought sequence of the thick- the parietes. All the l viscera were freely ex- handled.	Within.	Twelve interrupted sutures introduced.	The closing of the wound was performed amid the most serious apprehensions for the safety of the patient; reaction complete in five hours; opium freely administered after the operation; ligatures came away on the 18th and 24th days; Dr. Peaslee's artificial serum injected for 14 days into the peritoneal cavity.	Fifty-seven days after was enjoying excellent health, and at the head of her family.	*Ohio Medical and Surgical Journal*, vol. xii, No. 1, 1859.
utting down upon the s found that the adhe- e very strong, especially mentum, and some of tained very large vessels. re cautiously separated, cysts emptied one after r with a large trocar. s was then withdrawn, adhesions in the pelvis y thick and firm and re- good deal of force to hem. The pedicle was rt and thick. Several the adhesions required and the portion of omen- on bled so freely that it n a knot with a whipcord This as well as the other were then brought he lower end of the in- nd the omental mass there as though it had her pedicle.	Retained without with the clamp.	Wire sutures passed along but not through the peritoneum.	Had four grains of opium immediately, and repeated in three hours; there was great sickness which lasted some days, but was ultimately stopped by kreosote and hydrocyanic acid. She was only allowed the mildest diet for the first week; the serous oozing from the lower extremity of the incision lasted for some days.	January 25th, 1860, is perfectly well in every way.	Unpublished, the particulars kindly communicated by the operator.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Na of tun
163.	September 22nd, 1846.	Mr. Cæsar Hawkins, London.	27.	Unmarried. Abdomen much distended; slight pain in the right iliac region; dyspnœa in recumbent posture; difficulty in micturition; catamenia regular; general health good; tumour first noticed four years ago, increased rapidly during the past eight months; never tapped; apparently no fluid in the peritoneum; was feverish, and had pain and tenderness in the right iliac region, for which she was treated.	None.	Three inches.	None.	Si ovaria v vas
164.	October 12th, 1855.	Dr. J. G. F. Holstein, America.	27.	Unmarried. Tumour of three years duration; only suffered from the inconvenience of distension of the abdomen; menstruation regular.	Not stated.	Seven and a half inches.	None.	Sin ovari of th ov weig 26
165.	October 14th, 1852.	Dr. R. L. Howard, America.	17.	Unmarried. Her health was greatly impaired, and death was apparently near at hand; abdomen much distended; tapped twice; tumour refilled rapidly; of five months duration.	Not stated.	From three inches above the umbilicus to the pubis.	Attached somewhat to the uterus, otherwise free.	Ova cys
166.	January 16th, 1857.	Mr. George Murray Humphrey, Cambridge.	21.	Unmarried. Healthy; catamenia regular; disease of five years duration; was tapped in July, 1856, 9 quarts removed; again tapped in August and iodine injected, which was productive of great pain, but no good.	Chloroform given on towel.	Four inches.	None.	La thick ovaria cont bro viscid and a solid made small dary gro into inte

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
perature of the room ut air was freely ad- the room at the com- he operation. Scarcely rhage from the incision. ured, and 17½ pints of l, clear fluid drawn off. erced and tied in two ortions, and a ligature nd the whole circum- the pedicle, and the d above the ligature. rhage occurred; a por- cyst left to slough off gatures.	Within.	By four sutures and adhesive strapping.	Laudanum was given for the pain in back; there was some collapse which was suitably treated; the catheter was also used; no sickness; pulse remained steady; scarcely anything but cold water was allowed at first, in order to prevent movement of intestines, &c.; sutures removed on the 25th; the left leg began to swell on the 11th of October; the ligature of the pedicle came away on the 22nd day after the operation.	Several weeks after the operation, the patient was quite well.	*London Medical Gazette*, October 30th, 1846; and kindly revised by the operator.
wn from the abdomen upon a ligature which ously been made to s walls. Pedicle was nd tied firmly in two No hæmorrhage, and e viscera exposed ex- uterus.	Not stated.	Not mentioned.	Cure progressed without serious symptoms; the ligature came away on the 17th day; left for her home on the 31st October, in excellent health and spirits.	At the date of the report was in perfect health.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, Hamilton's Report.
oneum surrounding the s divided on a grooved the situation of the nd the pedicle divided m it.	Not stated.	Not mentioned.	The patient recovered without an unpleasant symptom, in eight weeks.	The patient has been married for several years, and is in perfect health, though she has not had any children.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, Hamilton's Report.
thick and stout, tied four portions; ligature it at lower part of the	Within.	Edges of linea alba and peritoneum approximated by fine sutures, and those of the skin with ordinary sutures.	Three grains of opium given in the first 24 hours, none subsequently; recovered without any unfavourable symptom; there was rather copious, fœtid, dirty discharge from the wound a few days after the operation, it gradually ceased.	In October, 1858, she was quite well, and able to bear a great deal of exertion.	Kindly communicated by the operator, and also *Medical Times and Gazette*, June 12, 1858.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N o t
167.	August 26th, 1857.	Mr. Joseph Hunt, Ashton-under-Lyne.	27.	Duration of the disease, from about eighteen months before I saw her; she was tapped on 1st April, 29th May, 11th and 31st July, again on 22nd August, 1857; she was in such a weak and reduced condition that she begged to be operated upon.	Chloroform administered on fine spongio-piline.	Six and half inches at first, but had to be extended two and half inches above the umbilicus.	Few and recent, easily torn through; mostly to the small intestines and parietes of abdomen.	Multi the of being infin pable taini 1dr. and t a di fresh
168.	April, 1858.	Mr. Hutchinson, London.	23.	Unmarried. Disease first noticed two years previously; in good health; tapped once.	Chloroform administered	Long.	None.	Mult ovari the ment very ous.
169.	August 30th, 1858.	Mr. Hutchinson, London.	46.	Married several years; had one child. Catamenia regular; much emaciated; countenance expressive of malignant disease; on account of emaciation had not left her bed for more than six weeks.	Chloroform administered	From navel to pubis afterwards enlarged to two inches above the umbilicus.	Extensive, both in front and at the sides.	Pol ovari in so the c were in th
170.	May 8th, 1836.	Mr. Jeaffreson, Framlingham.	33.	Married; had children, two since the growth began. Discovered during the second labour, occupying the entire left half of the pelvis, and was pressed above the brim of the pelvis; the tumour rapidly increased after the next delivery.	Not used.	One and a half inches.	None.	Bil ovar
171.	March, 1855.	Dr. Kimball, America.	25.	Unmarried. Tumour of seven years growth; menses regular.	Not stated.	From umbilicus to the pubis.	None.	O cy

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
6th August, the tumour ved; the temperature m was about 70°; one was tapped, and about of gelatinous fluid re- l went on well besides.	Left within the cavity, being very short.	Six sutures, not carried through the peritoneum.	The ligatures came away on the 19th day; wound quite healed on 2nd October; had an attack of diarrhœa, from indiscretion in diet ten days after the operation, from which she with difficulty recovered; no other unfavourable symptoms occurred.	In three months after the operation she had entirely recovered her usual health and strength, and up to this time continues well, following her usual occupation. She is heavier than ever she was in her life before: looks stout and robust.	The particulars kindly communicated by the operator.
vas long though broad; isfixed, tied, and then the wound.	Transfixed, tied, and then secured external to the wound.	Closed by silver sutures.	Made an excellent recovery.	Returned into the country in good health.	*Medical Times and Gazette*, July 17th, 1858; and kindly revised by the operator.
lerable quantity of fluid opening the abdomen; ek, short, and vascular: rced and tied in four trong whipcord ligature g the whole in order to ast hæmorrhage, and to pedicle external to the	Without the abdominal cavity.	Deep wire sutures used.	Supported almost solely the first six days by enemata; pulse not less than 130; but little opium was given on account of freedom from pain; excepting her feeble condition, her subsequent progress was one of unimpeded recovery.	In seven weeks was in good health and rapidly recovered, but died subsequently of cancer.	*Medical Times and Gazette*, October 23rd, 1858; and kindly revised by the operator.
was cut into, grasped , and drawn forwards escaped; a second and st was punctured and of its contents, being the same manner; the was entirely extirpated.	Within.	By two sutures, but not carried through the peritoneum.	On the 10th had incessant vomiting, hiccough, and almost imperceptible pulse; these symptoms subsided, and the patient recovered.	She is now (1859) 56 years of age, and in good health. She has had, since the operation, one boy and three girls.	Kindly communicated by Mr. Jeaffreson, jun., who received the particulars from his father, who though infirm is still living.
was evacuated and ough; double ligature e pedicle and another	Not stated.	Not mentioned.	On the 36th day rode out, though the ligature of the pedicle had not come away.	Not stated.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 194.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
172.	July 12th, 1836.	Mr. R. C. King, Saxmundham, Suffolk.	40.	Tumour of six years duration; much emaciated.	Not stated.	Three inches	None.	Ova wit
173.	1850.	Dr. Kiwisch, Hamburgh.	19.	Married; never had children. The disease had existed ten months; large rapid-growing tumour, filling the whole of the abdominal cavity; weakness; loss of appetite; intense pain; but on the whole general health good; tapped once, per vaginam.	Not stated.	Eight inches long in the median line.	None.	Ov coll toid ing
174.	1849.	Dr. Knorre, Hamburgh.	24.	Married; never had children. The disease had existed two years and a half; the tumour filled the whole of the abdomen, and when the patient sat, rested on the thighs. The general health was undisturbed; all the organs performed their functions regularly, only the bowels were sluggish.	Not stated.	Two inches long in the median line.	Extensive, with the anterior abdominal walls.	Sim cos ye co fla man trio
175.	1850.	Dr. Krauel, Rostock.	27.	Married. Tumour noticed for more than two years. Was tapped two months previously to the operation, and the fluid again collected very rapidly. Abdomen much distended; œdema of the abdomen and lower extremities.	Not stated.	Ten inches.	None.	Tw cys righ
176.	May 22nd, 1855.	Dr. J. R. Litzenburg, America.	Not given.	Married. Tumour had been observed two years, and had grown very rapidly for the last six months; abdomen much distended; tapped twice, but tappings did not materially reduce the size of the abdomen; emaciation extreme; appetite continued good.	Not stated.	Eighteen inches.	Adherent to the parietal peritoneum omentum colon, smallintestines, and iliac fossæ.	Mul o w m 40 lb of th ary tain app b an to

gs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
st was punctured and rough the incision; the ound the pedicle slipped he tumour was excised; ge took place from three e of which was of large hey were ligatured; the was trifling.	Not stated.	Not mentioned.	Tinct. of digitalis and opium administered, and ice applied to the bowels; but little sickness; at the end of a week the patient came down stairs, and made a good recovery.	In December, 1836, has become more fleshy and continues perfectly well.	*Lancet*, January, 1837.
e of the bowels; conne cyst and some blood to the abdominal cavity, removed with sponges; d *en masse*.	The pedicle was not sewed into the abdominal wound.	Wound united by four sutures.	At first slight reaction; afterwards formation of an abscess in the iliac region; recovery in forty-four days.	After seven years the patient perfectly healthy and strong, and menstruates regularly.	Scanzoni's *Beiträge*, &c., 1858; Simon's Table.
nour escaped after the were separated with the d the scalpel, and the of 8 lbs. of cystic fluid; e was pierced and tied rtions; no accidents occthe operation.	Not stated.	The peritoneum was not included in the abdominal sutures.	Slight reaction; cure in four weeks.	The patient is still healthy.	Scanzoni's *Beiträge*, &c., 1858; Simon's Table.
nour was punctured and contents evacuated, and ved easily from the abhe pedicle was ligatured and the tumour excised.	Not stated.	Not stated.	The symptoms of reaction soon after the operation, were somewhat severe; the patient was discharged at the end of six weeks cured.	The condition of the patient seven years after the operation was excellent.	Scanzoni's *Beiträge*, &c., 1858; appendix to Simon's Table, p. 140.
ns separated by the Pedicle secured by a gature, and left long o reach the lower exf the external incision, ened in the external	Not stated.	Not mentioned.	Patient suffered from flatus and was relieved by the rectum tube. First ligature came away on the fourteenth day, and the second on the nineteenth day. Patient went home on the twenty-second day.	Ten months after the operation was in better health than before.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2; Hamilton's Report.

No. of case	Date of the operation	Name of the operator	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Adhesions.
177.	February 27th, 1835.	Mr. Lizars, Edinburgh.	36.	Unmarried. Tumour of six years duration; menses regular, but scanty and light coloured; mercury and diuretic medicines had been repeatedly administered.	Not stated.	From the ensiform cartilage to the pubes.	None of the larger tumour; the smaller adherent to the pelvis and to the uterus.
178.	November 19th, 1843.	Mr. Lane, London.	28.	Unmarried. Disease had existed six years; not in bad health, but thin and troubled with cough; pulse irritable, usually 112.	Not used.	Five inches.	None.
179.	February 15th, 1844.	Mr. Lane, London.	47.	Married thirteen months. Had no children; disease had existed about a year, according to her own statement; had been thrice tapped; as large as ever in three weeks from the last tapping; a good deal enfeebled by the disease.	Not used.	Eight inches.	Considerable; universal in front and above the umbilicus; none below or posteriorly.

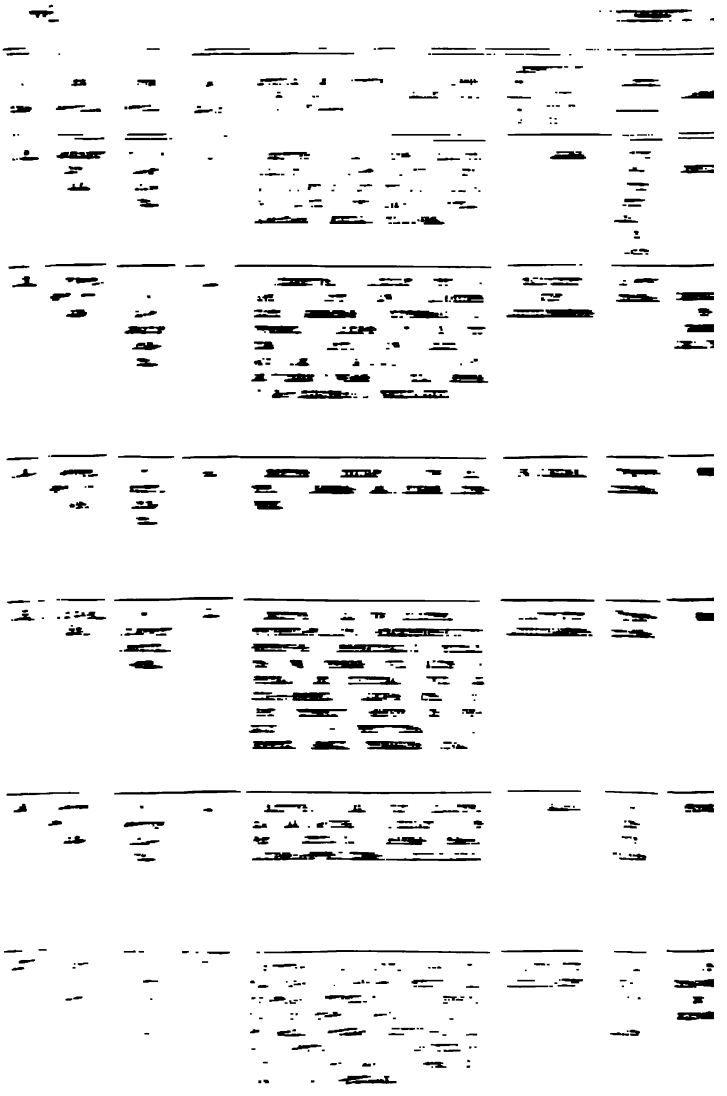
s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
leal of ascitic fluid es- ie incision being made. tumour was brought e parietes of the ab- edicle transfixed and) portions, and tumour The other ovary was ised, but was not dis- ccount of the adhesions. rhage during the oper-	Not stated.	By seven interrupted sutures, adhesive straps, and a bandage.	About three hours after the operation copious hæmorrhage occurred. The four lower sutures were cut, and several coagula of blood removed. The ligature was found firm and fast and no oozing vessel was discovered. The wound was reclosed, and she subsequently rallied from the loss of blood, and made a good recovery.	No account.	Lizars on the *Extraction of Diseased Ovaria*, p. 89.
from which 12 pints of been drawn off seven ous to the operation, ted in the pelvis, and) be fixed there by ad- ut on letting air in e cyst and the wall of the tumour rose out of into the abdominal	Within.	By five interrupted sutures passed close to, but not through the peritoneum.	Operation at three o'clock. Pulse 112, before and after the operation; at five o'clock the pulse had risen to 120. This patient had peritonitis and a very tedious convalescence. Half-a-pint of matter escaped from the abdominal cavity daily, for a fortnight. She had also phlebitis and phlegmasia dolens. Treated by opiate enemata, leeches, and tonics.	She married a year after the operation. She is now alive and has had five children.	Not previously published; the case is referred to in Lee's Table. The particulars were kindly communicated by the operator.
ie operation 25 pints of drawn off to enable the pe by the wound.	Within.	By eight interrupted sutures passed down to, but not through the peritoneum.	Moderate reaction. Twice leeched, opiate enemata, mineral acids given. Had quite recovered by March 27th.	Lived in good health for two years after the operation. Died of stricture of the ileum.	Not previously published; the case is referred to in Lee's Table. The particulars were kindly communicated by the operator.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
180.	November 21st, 1844.	Mr. Lane, London.	26.	Unmarried. Disease had existed about three years; she had not been tapped, and was in fair health.	Not used.	Five inches.	None.
181.	1845.	Mr. Lane, London.	39.	Unmarried. Disease had existed about four years.	Not used.	Five inches.	None.
182.	1848.	Mr. Lane, London.	19.	Unmarried. Disease had existed two years.	Chloroform administered with Snow's apparatus.	Four inches.	A small portion of omentum attached to the cyst.
183.	1848.	Dr. Langenbeck, Berlin.	52.	No account.	Not stated.	Two inches.	Filamentous with the omentum.
184.	February 7th, 1851.	Dr. Langenbeck, Berlin.	38.	Aborted once. The disease had existed four years; tolerably healthy, but pale in appearance; rapid growth of the tumour in the last year; digestive derangements and rapid emaciation; still comparatively in a good state of health.	Not stated.	Two inches.	None.
185.	November 5th, 1852.	Dr. Langenbeck, Berlin.	34.	Unmarried. Delicate constitution; disease had existed five years; emaciation; abdomen as large as at full term of pregnancy; tumour moveable; still in a comparative state of good health.	Chloroform administered.	Two and a quarter inches.	None.

rs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
remarkable. The cyst ɔd by tapping.	Within.	By five interrupted sutures passed down to, but not through the peritoneum.	She was bled to eight ounces on the second day, the pulse having risen from 96 to 120. She recovered in three weeks.	Is now living: has officiated as nurse at St. Mary's, St. Thomas's, and St. George's hospitals; she is now doing duty at the latter hospital.	Not previously published; the case is mentioned in Lee's Table. The particulars were kindly communicated by the operator.
oved. Nothing worthy ng. The cyst was re-apping.	Within.	By five interrupted sutures not passed through the peritoneum.	She recovered well from the immediate effects of the operation, but she had pelvic abscess from which she suffered severely.	The discharge from the abscess never ceased. Movements of the hip joint much interfered with. Died five years after from diseased hip.	Not previously published. The particulars were kindly communicated by the operator.
re was applied to the ɔmentum before it was rom the cyst. The cyst ed to the size of the tapping.	Within.	By four interrupted sutures passed down to, but not through the peritoneum.	She was bled to eight ounces on the third day. She had peritonitis, and pus escaped from the abdomen, she however made an excellent recovery.	Is now living.	Not previously published. The particulars were kindly communicated by the operator.
ınt.	Not stated.	Not mentioned.	Slight reaction at first. The wound healed on the tenth day; and the patient convalescent.	In the third week, in consequence of an injury, peritonitis came on, and the patient died on the 26th day.	Focks' Table. *Monatsschrift für Geburtskunde*, May and June, 1856.
ıour partially escaped ɔacuation. The pedicle, ɜ two inches thick, was *ɑsse*, and six ligatures ɔately applied.	Not stated.	Not mentioned.	Slight attack of peritonitis. Cure in three weeks.	Patient is still healthy and strong.	Scanzoni's *Beiträge*, 1858; Simon's Table.
was seized with hooks ured; it was then drawn he pedicle was exposed, s pierced and tied in ɔns. The tumour was mmediately above the	Kept without by means of a ligature passed through the pedicle and lips of the wound.	By six sutures.	Suppuration continuous for two months: symptoms of fæcal impaction. Cure in two months.	The patient still healthy and strong.	*Monthly Journal of Medical Sciences*, Edinburgh, 1854, vol. ii, p. 174.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions	N o tu
186.	1846.	Dr. Larrey.	33.	Tumour observed after the third labour; after various attacks of inflammation spontaneous rupture took place a little below the umbilicus, and gave issue to pus and hair; pus, hair, and fragments of bones also escaped by the urethra.	Not stated.	Not given.	Not mentioned.	Pedi ovari
187.	January 5th, 1782.	L'Aumonier.	21.	Came under the operator's care six or seven weeks after delivery; was then much emaciated; had febrile symptoms with a purulent vaginal discharge; hypogastric region tense and painful; had diarrhœa, and her bodily powers were failing.	Not stated.	Oblique; four inches.	The intestines were strongly adherent to each other and to the peritoneum.	Scir ovari absce ov
188.	December, 1809.	Dr. Ephraim McDowell, America.	Not given.	Married. Pregnancy supposed to exist; had pains similar to those of labour; abdomen considerably enlarged; the patient was willing to undergo the experiment of the tumour being extracted, and rode sixty miles on horseback for the purpose.	Not stated.	Three inches from and parallel with the rectus muscle; nine inches long.	Not stated.	Ovar wei twe and
189.	1816.	Dr. Ephraim McDowell, America.	Not given.	Tumour moveable from side to side, and extraction advised; adhesions diagnosed on the left side.	Not stated.	Midway from umbilicus to pubis.	Not stated.	"Sc ova we si
190.	April 1st, 1817.	Dr. Ephraim McDowell, America.	Not given.	Tumour exceedingly troublesome; had severe lancinating pains; only able to relieve the bladder by lying on her face in consequence of the tumour compressing the urethra.	Not stated.	Not given.	Not mentioned.	"Sc ova we fi
191.	May 12th, 1823.	Dr. Ephraim McDowell, America.	Not given.	Unmarried.	Not stated.	Whole length of linea alba.	Not stated.	O cy

of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
removed. A fistulous ation was found existthe bladder, through e same time a calculus d.	Not stated.	Not mentioned.	Had an attack of confluent variola on the fifteenth day, and she recovered.	Not stated.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 200.
ncision being made, a d tumour was found, the ovary was conhe tumour was punc- about a pint of dark scaped, which had col- e Fallopian tube, and nmunicated with an med in the substance y and had burst into he ovary was removed. used.	Within.	The external wound was not closed.	The cavity of the abscess was filled with lint dipped in the yolk of an egg and honey. On the forty-seventh day was considered well.	No account.	*Medico-Chirurgical Review*, October, 1843, p. 393.
ominal parietes much wing to her journey. as punctured. A liga- aced round the pedicle, umour excised. The scaped and could not during the operation. re was brought out at nd of the incision.	Not stated.	By interrupted sutures and adhesive straps.	On the fifth day she was found making her bed, and in twenty-five days returned home well.	No account.	*London Medical Gazette*, vol. xxxv, p. 744.
e was put round the tube, but the tumour be removed from the cavity. The wound ged this was eventuolished. The ligatures at the lower angle of	Not stated.	By interrupted sutures, adhesive straps, and bandages.	She was well in two weeks, but the ligature did not come away until the fifth week.	No account.	*London Medical Gazette*, vol. xxxv, p. 745.
was placed round the the tumour excised. e slipped and some of tied singly but were h. A ligature was ed round the pedicle down, and firmly tied.	Not stated.	By interrupted suture and adhesive straps.	Recovered.	Subsequently suffered a good deal from hysteria.	*London Medical Gazette*, vol. xxxv, p. 746.
was punctured. Liga- l around the pedicle. entirely recovered.	Not stated.	Not stated.	For fifteen days had a sanguinolent putrid discharge from the wound, and recovered.	Not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859.



lings of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
evacuated. Double liga- rough the pedicle, and to the omental vessels. No rable symptoms occurred. r removed.	Not stated.	Not mentioned.	Wound healed; sat up at the end of three weeks.	Not stated.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 236.
ysts could not be evacu- n separating the adhesions mentum, four vessels had atured, and some strips of er covering of the cyst ft attached to the perito- the pedicle was found to the size of an adult wrist; secured by a double liga- he tumour was entirely d.	Not stated.	By nine interrupted sutures.	The progress of the case to complete recovery was favourable. The ligatures of the pedicle came away on the thirty-fourth day.	The patient recovered her strength, and menstruation became regular.	*American Journal of Medical Sciences*, July, 1859.
punctured and contents ed; free hæmorrhage in ence of the ligature be- detached; a double liga- s then passed through the ; this was insufficient, and d one had to be used.	Within.	Wound closed by eight interrupted sutures.	Reaction established with difficulty. On the thirty-fourth day the patient was so far recovered as to travel a hundred miles.	No account.	*Provincial Medical and Surgical Journal*, July, 1859.
tumour was punctured, with hooks, and drawn for- pedicle was pierced and two portions, and after- s there was a little hæmorr- small ligature was made rcle the whole; ligatures applied to ten vessels her.	Pedicle included in the sutures of the wound.	By sutures, but not carried through the peritoneum.	A sheet dipped in water was applied to the abdomen, and after a short time a bladder filled with ice was also applied, which appeared to act beneficially. The patient made a good recovery.	Died in March, 1852, from cancerous deposit in the pancreas and lungs.	*Ueber die Eierstocks-wasserruchten*, von Dr. Ed. Martin, Jena, pp. 95 & 18.
ur evacuated by incisions; out, and ligatured around icle.	Not stated.	Not mentioned.	The ligature came away on the thirteenth day. On the seventeenth day was sitting up.	No account.	Dr. Lyman's Report, Boston, 1856, case 227.
the incision and separa- the adhesions the tumour ped, one ligature applied, there was free hæmorrhage d used; cystic fluid and emoved by a sponge, and nd closed.	Within.	By interrupted sutures, but not through the peritoneum.	One ligature came away on the nineteenth, the other on the thirty-first day. She returned home well on the 8th of May.	She died seven and a half years afterwards from a congestive chill during menstruation.	*American Journal of Medical Sciences*, April, 1859.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nat of t Tum
198.	September 30th, 1857.	Dr. Henry Miller, America.	30.	Married; had two children. Menstruation scanty and irregular. Tumour first noticed fifteen months previously. Much emaciated, countenance anxious. Tumour easily felt per vaginam.	Chloroform administered	Two inches, afterwards considerably enlarged.	Slight, posteriorly.	Multil ovar weig 11 l
199.	1843.	Mr. Morris, Rochdale.	Not given.	No account.	Not stated.	Long.	Not stated.	Ovaria
200.	December 11th, 1854.	Dr. Robert Nelson, New York, America.	21.	Married. Supposed she was pregnant for a long time. Her room was small, rather dark, damp, and cold, without means of warming it.	Chloroform administered	Twenty-two inches.	None.	Multil ovar weig 21 l
201.	August 19th, 1844.	Mr. W. B. Page, Carlisle.	33.	Married; had two children. duration, two years; menstruation occurred every three weeks since the tumour was first noticed; previously it occurred regularly.	None used.	Four inches.	None.	Ova cyst
202	September 21st, 1850.	Dr. Peaslee, America.	25.	Unmarried. Tumour of fifteen months duration; menses regular; feeble and emaciated; has had hydrogogues, diuretics, and iodine treatment; tapped ten days previously.	Not stated.	Nine inches, beginning two inches above the umbilicus.	Slight.	Cyst both

gs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
first incision some purviscid fluid escaped into toneum; pedicle was d tied, effused fluid careoved, and the ligatures ut at lower portion of	Within the abdominal cavity.	Deep sutures not including the peritoneum; and superficial interrupted.	One ligature came away on the 17th the other on the 19th of October. Nothing unusual occurred to interrupt her recovery.	On August 16th, 1858, was delivered safely and easily of a fine boy.	*American Journal of Medical Sciences*, April, 1859.
r removed.	Not stated.	Not mentioned.	Recovered.	No account.	Dr. R. Lee's Table, case 91.
tied in two portions. e inches of the Fallopian its fimbriæ removed umour. The operation rmed in the room, at a ure of 46° *F.*	Within the abdominal cavity.	By three long silver pins, five common tinned pins, and eight interrupted sutures, and adhesive straps.	The first ligature came away on the 6th of January; she perfectly recovered.	In May, 1858, could take a deal of exercise. Continued in robust health.	*American Medical Monthly*, July, 1858.
hage from a small vessel arrested before the peri- as incised. Some ascitic ped. Cyst siezed with a and tapped. By tracressure on the abdominal t one-third of the cyst cted, the rest extruded ation. Two ligatures n the pedicle and the excised between them. brought out at the lower the wound.	Within.	Four interrupted sutures, not through peritoneum.	Did not have a bad symptom; the ligature did not come away for more than twelve weeks.	Walked direct from the infirmary to Edinburgh, 100 miles. Three years afterwards was in good health.	*Lancet*, April, 5th, 1845, p. 397; and kindly revised by the operator.
t of the left ovary was , and a double ligature ough the pedicle and tuised. A cyst of the right then discovered; after double ligature through it was removed.	Not stated.	Not mentioned.	The last ligature came away in two months; seventy-two hours after the operation the menses returned for three days.	No account.	Dr. Lyman's Report, Prize Essay; Boston, 1858, case 234.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Na of tu
203.	February 12th, 1855.	Dr. E. R. Peaslee, America.	26.	Disease first noticed four years previously; mercury, iodide of potassium, and bandaging resorted to; tapped several times; a sac was formed between the rectum and vagina which was tapped on two occasions; dyspnœa urgent; ascites; much emaciation, but cheerful; the gum elastic tube was after tapping retained in the vagina; menstruation irregular.	Sulphuric ether administered	Eleven inches long.	To the great omentum.	Multi ova wei abou
204.	April 23rd, 1856.	Dr. E. R. Peaslee America.	39.	Unmarried. Delicate constitution; tapped eight times; tumour first noticed in April, 1854; much emaciated, obliged to keep her bed in consequence; catamenia absent ten months.	Sulphuric ether administered	Not given.	To stomach omentum and iliac fossa.	Multi ova wei 11
205.	October 28th, 1856.	Dr. E. R. Peaslee, America.	27.	Married; had four children. Enlargement first noticed in April, 1855; tumour had produced prolapse of uterus and bladder which could not be returned and retained until after tapping.	Sulphuric ether administered	Eight inches.	Firm.	Multi ova wei 9
206.	Not given.	Dr. Charles A. Pope, America.	Not given.	Duration, &c., not mentioned.	Not stated.	Not given.	Not mentioned.	Ovari
207.	Not given.	Dr. Charles A. Pope, America.	Not given.	Duration, &c., not mentioned.	Not stated.	Not given.	Not mentioned.	Ovari
208.	April 23rd, 1857.	Dr. Potter, New York County, America.	25.	Married. General health good; tumour distended the walls of abdomen from pubis to sternum; tapped; operation performed soon afterwards.	Chloroform administered	From above umbilicus to symphysis pubis.	Slight, to the omentum.	Comp each right ing the le the hen
209.	November 18th, 1834.	Dr. Carl F. Quittenbaum, Rostock.	42.	Married; the patient had four children. Tumour first noticed two years ago; great distension of the abdomen; tapped twice; rapid regeneration of the fluid.	Not stated.	Six inches.	Very slight.	Cys coma right

of and accidents during ie operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of Information.
ts punctured. Arti- used. A small artery is of adhesion had to Pedicle transfixed a double ligature. e of the artery was ; at the upper end on. The ligatures of passed through the he side of the elastic r.	Within.	Incision closed by ten stout needles, but not carried through the peritoneum. No adhesive straps applied.	Had peritonitis, for which injections into the peritoneal cavity through the vaginal tube were used for several days; on the 44th day could walk about the room.	In November menses had not returned, otherwise was quite well.	*American Journal of Medical Sciences*, January, 1856.
hands were immersed *ially* prepared serum, is separated. Pedicle and tied in two por- orrhage not excessive. was applied to a vein muscle.	Within.	Nine needles and six sutures used.	The first ligature came away in the 14th, and the second in the 18th week; the bowels moved freely only on the 9th day.	On August 25th, 1858, was in perfect health.	*American Journal of Medical Sciences*, October, 1858.
res applied to the ad- while attempting to he mass gave way: occurred to the ex- .; pedicle was pierced two portions; the re brought out at the f the wound.	Within.	Ten needles and nine interrupted sutures used.	The two ligatures of the pedicle came away 29 days after the operation; the bowels first opened on the 8th day.	On August 20th, 1858, was quite well.	*American Journal of Medical Sciences*, October, 1858.
emoved.	Not stated.	Not mentioned.	Recovered.	No account.	*American Journal of Medical Sciences*, April, 1859.
emoved by means of .	Not stated.	Not mentioned.	Recovered.	No account.	*American Journal of Medical Sciences*, April, 1859.
s separated by the the scalpel. Pedicle udinally into three strong ligature ap- . The left ovary was he same operation.	Within.	By common uninterrupted sutures, and adhesive straps.	Opium and veratrum viride were given; ligatures all came away by the 25th of May, and was discharged cured.	No account.	*American Journal of Medical Sciences*, October, 1857.
en masse; protrusion ines; slight hæmorr-	Not stated.	Not stated.	Recovered in four weeks; had extensive peritonitis soon after the operation.	Died eight weeks after the operation from the effects of cold.	Scanzoni's *Beiträge*, 1858; Simon's Table, pp. 110 & 138.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision	Adhesions.	N o t
210.	1842.	Dr. Carl F. Quittenbaum, Rostock.	36.	Married; disease of five years duration. The abdomen was much distended; tapped once. The movements of the patient were much incommoded by the size of the tumour, so that it was very difficult to sit down.	Not stated.	Fourteen inches.	Firm and intimate to parietes, diaphragm, spleen, &c.	Cyst the ov
211.	1832.	Dr. Ritter.	31.	Married; had five children. Tapped; tumour of one year's duration; commenced during her fifth pregnancy, and increased very rapidly.	Not stated.	Long.	In the epigastric, umbilical, and iliac regions.	Ov cyst, in w
212.	September 14th, 1829.	Dr. L. Rogers, New York, America.	20.	Tapped for ascites seven times within two years. On the last occasion, an ovarian tumour was found occupying the umbilical and left pelvic regions; anxious for the performance of the operation.	Not stated.	From Two inches above the umbilicus to the pubes.	Firm to the peritoneum, and around the umbilicus.	Cy solid wei 3
213.	1846.	Dr. Siebold, Darmstadt.	28.	Married; never had children. The tumour had existed two years; several times tapped; considerable distension of abdomen; emaciation; the condition of the powers still good.	Not stated.	Four inches.	None.	Ov cy
214.	May 24th, 1823.	Dr. Alban G. Smith, America.	30.	Married; had two children. Menses regular.	Not stated.	From umbilicus to within one inch of pubes.	None.	"Sci tum right
215.	Not given.	Dr. Alban G. Smith, America.	Not given.	No account.	Not stated.	Not given.	Not stated.	Ov tu
216.	1821.	Dr. Nathan Smith, Connecticut, America.	33.	Married; had five children. Tumour had existed several years, and supposed to have burst three times, as it disappeared on each occasion; patient's general health not much affected; increased rapidly in size; fluctuation perceptible.	Not stated.	Three inches.	To parietes and omentum.	Uni ov

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
nour was evacuated of ts, and the adhesions with considerable diffi- pedicle was ligatured nd the tumour excised.	Not stated.	By seventeen sutures.	The symptoms of reaction were but slight, and in two months had quite recovered.	Subsequently had a healthy child; and four years afterwards was quite well.	Scanzoni's *Beiträge*, 1858; Simon's Table, Appendix, p. 139.
removed. During the three vessels, each as goose-quill, were tied. ons had to be divided. during the operation.	Not stated.	Not mentioned.	On the eighth day a discharge of bloody serum from the wound occurred and gave great relief. Recovered in nine weeks.	No account.	*British and Foreign Med.-Chirur. Review*, October, 1843. p. 395.
iesions were carefully by dissection. The tu- then drawn out of the cavity and excised: tions occupied two gatures cut close. Por- itoneum were removed.	Within.	By sutures and adhesive straps.	Recovered without an unpleasant symptom.	Menses returned; complete recovery.	*London Medical Gazette*, Nov. 21st, 1829.
n of the intestines and luid and blood into the cavity. The ligatures close to the knots and abdominal cavity.	Within.	Not stated.	The patient returned to her native land in six weeks.	Ten years afterwards patient quite well.	Scanzoni's *Beiträge*, 1858; Simon's Table.
ied of several pints of atter, and with some extracted. Ligature e pedicle.	Not stated.	Not mentioned.	Menses appeared on the fifth day. The ligature came away on the twenty-fifth day.	In 1856 was quite well.	Lyman's Report, *op. cit.*, case 259.
emoved.	Not stated.	Not mentioned.	Recovered.	No account.	Lyman's Report, *op. cit.*, case 260.
iour was pushed up- d, and punctured. It drawn out and adhe- mentum separated by and two arteries liga- ier adhesions separated e and fingers.	Within.	By adhesive straps and bandage.	No unfavourable symptom occurred. Could sit up in three weeks.	Made a good recovery.	*Edinburgh Medical Journal*, vol. xviii, p. 532.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of incision.	Adhesions.	N o ta
217.	1848.	Dr. Protheroe Smith, London.	34.	Disease of two years duration; dyspnœa; lowness, and pain in the left leg; health generally deranged.	Not used.	Large.	None.	Mul ov
218.	October 20th, 1843.	Mr. G. Southam, Salford.	37.	Married; had five children. Tumour about two years growth; menstruation regular; abdominal enlargement frequently reduced by remedial measures; bowels generally constipated; some vaginal protrusion externally.	Not stated.	Nine inches.	With the omentum.	Sol fluid we 4
219.	June 24th, 1845.	Mr. G. Southam, Salford.	38.	Married twenty years; has had no children. Enlargement of abdomen commenced eight years ago, but was attributed to corpulency; during the last twelvemonths the size of the tumour has caused dyspnœa; refused to be tapped; abdomen enormously distended.	Not used.	Seven inches.	None.	Un cys left we 3
220.	November 24th, 1848.	Dr. Stilling, Cassel.	28.	Married; had three children. Had pain in the bowels four years; swelling noticed two years; previous tapping through the vagina and abdominal integuments; size of the body very great; ascites; emaciation.	Not stated.	From the navel to the symphysis, afterwards increased.	Slight omental.	O cor inn hy
221.	April 22nd, 1852.	Dr. Tanner, London.	56.	Unmarried. Suffered from abdominal enlargement with pain for three years; emaciated and very weak; dyspnœa; abdomen very large; tapped once; refilled rapidly, and hence the removal of the tumour was resorted to.	Chloroform by an inhaler.	About three inches.	None.	Mul o o ve

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
ssels had to be secured s, and torsion used. ur cysts in succession. ought forward by vul- dicle tied with two	Within.	By interrupted sutures, carried through the peritoneum.	Peritonitis supervened. Bled to 10 oz. Unfavourable symptoms disappeared twenty-three days after the operation, when the ligatures came away. Recovery complete.	Continues in perfect health.	Particulars kindly communicated by the operator.
ion was carefully dis- The patient became nd the intestines were the abdominal cavity ity. An opening was gh the pedicle with a void injuring the in- A double ligature was ough the incision, and tied in two portions. e ligatures broke in hæmorrhage after the the tumour. Ligatures t at the lower angle of	Not stated.	By seven uninterrupted sutures and adhesive straps.	Had peritonitis. The ligature slipped into the abdominal cavity, but escaped during the suppuration.	In good health at the present time (1859).	*London Medical Gazette*, vol. xxxiii; and kindly revised by the operator.
d, and from sixteen to ints of clear yellowish off. A ligature was nd the pedicle and the noved. The ligature t out at the lower wound.	Not stated.	By four interrupted sutures and adhesive straps.	The ligature appeared on the forty-ninth day.	Died in 1858 of gastric fever.	*Provincial Medical and Surgical Journal*, September 10th, 1845; and kindly revised by the operator.
n of two pints of fluid bdominal cavity. A he adherent omentum lapsed, which was de- returned.	Not stated.	Not mentioned.	Excessive hæmorrhage from the pedicle. Anæmia; pyæmia and fœtid discharge. A fistula remained for nearly a year.	Died from cholera, several years after the operation.	Simon's Table; Scanzoni's *Beiträge*, 1858.
ır was removed.	Within.	Silk sutures, not carried through the peritoneum.	Left her bed on the 10th of May, and was quite well soon afterwards.	Five years afterwards was in good health.	*Lancet*, September, 1852; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Natu of th tume
222.	May 26th, 1853.	Dr. Tanner, London.	31.	Married. Had only suffered five months; thought she was pregnant. Slightly made, weak, and delicate; of a strumous habit.	Chloroform by an inhaler.	Short.	Slight.	Unile ovaria
223.	1844.	Mr. Trustram.	18.	No account.	Not stated.	Short.	None.	Ovaria with fl conta
224.	Not given.	Unknown.	33.	No account.	Not stated.	Three inches.	Slight omental.	A sm ovaria conta 7 lbs. fluid.
225.	September 15th, 1847.	Dr. Vaulleguard.	25.	Unmarried. Tapped fifty-two times in three years; ascites existed at the same time; tumour of five years duration; menses appeared at eighteen years of age but irregular.	Not stated.	Seven inches.	None.	Cyst o left ov 18 lbs. weigh
226.	November 1st, 1849.	Dr. Van Buren, New York, America.	21.	Never menstruated; tumour of five years growth; had procidentia uteri.	Not stated.	Twelve inches.	To omentum.	Fibro tumou the l ovary weigh 7 lbs.
227.	November 6th, 1842.	Mr. D. Henry Walne, London	58.	Married; had five children. Miscarried several times: catamenia had ceased four years; subject to floodings; general health good; tumour first noticed two years previously.	Not stated.	Thirteen inches.	None.	Cyst of the ovary weigh 16 lbs.

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
removed.	Within.	Silk sutures, not carried through the peritoneum.	Was very low for twenty-four hours after the operation, but rallied. On the 24th of June returned into the country.	Remained well two years, then had symptoms of phthisis. Subsequent condition unknown.	*M.S. Clinical Medicine*, p. 346, kindly communicated by the operator.
removed.	Not stated.	Not mentioned.	Recovered.	No account.	Ashwell on *Diseases of Women*, p. 688. London, 1848.
placed around the id tumour excised.	Not stated.	Not mentioned.	Recovered in three weeks.	No account.	*Monatsschrift für Geburtskunde*, 1856, May and June; Fock's Table.
nour incised and its puriform contents dis- Two ligatures around e.	Not stated.	Not mentioned.	Ligatures came away on the sixteenth day. Recovered in twenty-five days.	No account.	Dr. Lyman's Report, *op.cit.*, case 283.
esion after separation three ligatures, which short. Five ligatures ired for vessels in the ament after dissection. toneum dissected from e to allow of the appli- he ligature. The pedicle in such a way as to he removal of the liga- broad ligament.	Not stated.	Not mentioned.	The last ligature came away on the nineteenth day, and she quite recovered.	Has since married and is in good health; menses appeared, and continued regular.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 281.
icle pierced by a double he first broke in tying it, remaining one was used ucing a second; these and the tumour excised. of the pedicle separately The pedicle was sub- encircled by a single	Not stated.	By interrupted sutures, adhesive straps, and a bandage.	On the 11th had symptoms of intestinal strangulation. The ligatures receded within the abdominal cavity, but came away on the 10th of January, and she recovered.	No account.	*London Medical Gazette*, December 23rd, 1842.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
228.	May 30th, 1843.	Mr. D. Henry Walne, London.	57.	Widow; had never any children. Dysmenorrhœa; menstruated until forty-nine years of age; abdominal enlargement noticed about eight years, increased rapidly.	Not stated.	Twelve inches.	None.	O w nea
229.	September 12th, 1843.	Mr. D. Henry Walne, London.	20.	Disease first noticed in 1839, as large as at full term of pregnancy. General health good; never tapped; became much thinner, and as disease was gaining ground operation advised; was bled to 8 oz. three weeks before the operation.	Not stated.	Fourteen inches.	None.	w 2
230.	February, 1858.	Mr. T. Spencer Wells, London.	29.	Unmarried. Cyst had been emptied seven times by tapping, and injected with iodine twice.	Not stated.	From two inches above umbilicus to near the pubis.	Firm and extensive.	Mul ovar we 2
231.	August 11th, 1858.	Mr. T. Spencer Wells, London.	38.	Married. Had three children; tapped three times; duration of disease unknown; urgent dyspnœa; general health tolerably good; fluid accumulated rapidly.	A mixture of one part chloroform to six parts of æther administered.	Small, afterwards enlarged.	Very close to the liver and gall bladder.	Mu ovar w 3
232.	November 5th, 1858.	Mr. T. Spencer Wells, London.	33.	Married ten years. Had four children; catamenia scanty, and ceased since May; much emaciation, and general debility; it was difficult to say whether ascites or ovarian disease was present. Exploratory incision decided upon, and if it proved an ovarian tumour to proceed with the operation.	Chloroform administered.	From near the symphysis to a little above the umbilicus.	To the omentum intestine and right iliac fossa.	Pse loid w 23 the tion of
233.	May 24th, 1859.	Mr. T. Spencer Wells, London.	43.	Married twenty years; has had eight children. Tumour noticed about four years. Large spare woman; sallow complexion; tapped, and six gallons of fluid removed.	Chloroform administered.	From two inches above the umbilicus to near the pubis.	Slight omental.	Ps loi t w

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
cle was pierced by a ture, and one broke in e pedicle was then in- ne double ligature and cised. After it was ere was some hæmorr- ch was arrested by ature. The advantage cision was particularly period.	Within.	By interrupted sutures, pads, and slips of plaster.	On the 7th phlebitis supervened, from which she gradually recovered; the ligature of the pedicle had not come away on the 20th of July.	No account.	*London Medical Gazette*, August 11th, 1843.
gradually advanced e wound. The pedicle d and tied in two por- the tumour excised. of the wound furnished od which escaped into inal cavity.	Within.	By thirteen sutures, strips of adhesive plaster, and a bandage.	Wound united on the 4th day; the catamenia appeared on the 16th; convalescence on the 17th day.	Eventually made a good recovery.	*London Medical Gazette*, October, 1843.
nt.	Within.	Sutures carried close to, but not through the peritoneum.	Much depression and vomiting; opium and stimulants given freely.	Twelve months afterwards Dr. West reported the case as a complete success.	*Medical Times and Gazette*, Feb. 19th, 1859; and kindly revised by the operator.
sions were separated. le was transfixed and portions.	Secured by ligatures and fixed outside the wound.	By hare-lip pins close to, but not through the peritoneum.	Much depression and vomiting; opium, with iced brandy and water, freely administered.	Six months afterwards was in robust health, muscular and strong.	*Medical Times and Gazette*, Feb. 19th, 1859; and kindly revised by the operator.
ein gave way in separ- e adhesions; a ligature laterally on the vein current of blood was d. The ligature came e 9th day.	Peduncle was secured by a clamp outside the abdominal cavity.	By hare-lip pins carried close to, but not through the peritoneum.	Suppositories administered to keep the patient under the influence of opium; pulse was 130 for seven days.	Three months afterwards was getting stout, and in very good health.	*Medical Times and Gazette*, Dec. 11th, 1858; and kindly revised by the operator.
o prevent the intestines r, tumour was removed escape of ascitic fluid. ry short, so that the placed close to the Scarcely an ounce of Ascitic fluid was not t until the wound had sed. Operation occu- inutes.	Stump of pedicle kept outside the abdominal cavity by a clamp.	By sutures, including the peritoneum.	Constant vomiting; accumulation of fluid in the peritoneum, a finger introduced through the wound, causing several pints of fœtid serum to escape, affording much relief; sickness ceased after its evacuation.	Has since gone on well.	*Medical Times and Gazette*, July 2nd, 1859; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used. mode of administration and preparations employed	Length of incision.	Adhesions.	
234.	June 24th, 1859.	Mr. T. Spencer Wells, London	29.	Unmarried. Duration of disease eighteen months; distension of abdomen, caused much pain; indigestion and dyspnœa; pulse rapid and feeble; thoracic organs healthy; tapped twice.	Chloroform administered.	From umbilicus to near the pubis.	To parietes, omentum, and intestines.	M ov
235.	July 25th, 1859.	Mr. T. Spencer Wells, London.	47.	Married two and half years. Generally had good health. Catamenia ceased at forty-three years of age; tumour noticed nine months after marriage; tapped several times; uterine hæmorrhage from a polypus, which was removed by torsion.	Chloroform administered.	Seven inches.	Extensive ot parietes, omentum, and intestines.	(ov wi be c i s pi l s i
236.	October 6th, 1859.	Mr. T. Spencer Wells, London.	41.	A married woman. Tumour of three or four years duration; tapped twice; general health much impaired.	Chloroform on towel.	Six inches.	Slight parietal and extensive omental.	M ov m so in
237.	October 12th, 1859.	Mr. T. Spencer Wells, London.	29.	A single woman. Tumour of twelve months growth only; much emaciated, and very weak.	Chloroform on towel.	Four inches.	Slight parietal and omental.	M
238.	November 19th, 1859.	Mr. T. Spencer Wells, London.	17.	Single lady. Tumour of two years growth; tapped eight times; much exhausted and emaciated by rapid growth, and refilling. This case was seen by Drs. Rigby and Priestly, and Messrs. Curling, Pierce, &c.	Chloroform on towel.	Four inches.	Moderately extensive parietal and omental.	M
239.	January 24th, 1860.	Mr. T. Spencer Wells, London.	23.	Tumour of three years duration; twice tapped; fair general health.	Chloroform on towel.	Four inches.	Slight omental.	M

f and accidents during e operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of Information.
tapped, and Hewitt's d used to ascertain f the cyst. Pedicle ery broad; clamp se to the uterus. traction necessary tside the wound. A e cyst left projecting lamp.	Without the abdominal cavity, by a clamp.	By wire sutures carried through the peritoneum.	Violent pains and restlessness on the evening of the operation; linseed poultices and opiate enemata used with benefit.	Two months after the operation strong and well.	*Medical Times and Gazette*, July 16th, 1859; and kindly revised by the operator.
ion one small artery be tied. Adhesions by the hand. Right ed. Free hæmorr- ıe cyst was removed, ving to be secured. as used, and the left ıbe tied to it, and the wound beside the	Secured by a clamp outside the abdominal cavity.	By sutures carried through the peritoneum.	Opiate enemata used, also hot poultices to the abdomen; quinine administered, which relieved the flatulent distension. On the 18th of August was considered convalescent.	On August 19th fast gaining strength.	*Medical Times and Gazette*, Aug. 13th, 1859; and kindly revised by the operator.
moved. Four liga- ntal vessels the only	Kept out by clamp.	Sutures carried through the perito- neum.	Recovered without a bad symptom till chronic tetanus supervened on the 15th day, which was treated by Woorara, from which she recovered.	In good health, January, 1860.	Paper read before the Med.-Chir. Society; the particulars kindly communicated by the operator.
moved through the n. Cysts tapped in	Kept out by clamp.	Sutures carried through the perito- neum.	Recovered well though kept back by secondary hæmorrhage from a branch of epigastric artery, and by a bed-sore.	In good health, January, 1860.	In the *Medical Times and Gazette*; the particulars kindly furnished by the operator.
res on omental vessel. withdrawn by suc- ying, and excised.	Kept out by ligatures of twine.	Sutures carried through the perito- neum.	Recovered without one bad symptom.	In good health, January, 1860.	Unpublished The particulars kindly communicated by the operator.
porarily compressed st cut off, and wound clamp removed after peduncle below it by e operator adds, "The he peduncle is more o the patient during tment than the clamp, s on the uterus."	Without.	Hare-lip pins through the peritoneum.	Recovered without a bad symptom. Hot poultices to abdomen, and small opiate enemata when there was pain.	Convalescent; sitting up, and wound healed, February 10th.	Not yet published. The particulars kindly communicated by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N c tu
210.	November 2nd, 1836.	Mr. W. J. West, Tonbridge.	45.	Married; mother of three children. Tumour of thirteen years duration; co-existent with pregnancy; pushed up above the brim of the pelvis, the labour coming on the same day, which terminated without assistance; dyspnœa and other distressing symptoms became manifest, and she decided upon having the operation performed.	Not stated.	Two inches.	None.	Ut ova
211.	1839.	Mr. W. J. West, Tonbridge.	23.	Unmarried.	Not stated.	Small.	None.	Ut ova
212.	April 28th, 1844.	Dr. Woyeikowski.	40.	Married; had three children. Supposed to be pregnant; menses having ceased fifteen months and pains coming on, it was thought labour had set in; enlarged uterus found protruding through the vagina, which was irreducible; abdomen distended, tapped; after which the uterus was replaced, and tumour then discovered in the abdomen.	Not stated.	From three inches above the umbilicus to the pubes.	Not stated.	La tu th o we 6 co colle

f and accidents during operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound If sutures carried through peritoneum.	Symptoms of reaction; length of time in recovery; and treatment.	Subsequent condition.	Source of information.
omewhat protruded ision, and by gentle whole sac was drawn ire was passed round and tied tight, and xcised. No hæmorr-	Within.	By four sutures and adhesive straps.	Cold spirituous lotions applied to the abdomen, and recovery was complete.	No account.	*Lancet*, vol. i, 1837-38, p. 397.
r pints of fluid re- he tumour excised.	Not stated.	Not mentioned.	Recovered.	No account.	*Lancet*, October, 1839.
noved.	Not stated.	Not mentioned.	The patient was able to walk home on the 25th day.	Had two children within three years.	*Edinburgh Monthly Journal*, and *American Journal of Medical Sciences*, 1847.

TABLE II.—UNSUCCESSFUL CASE

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N a tu
1.	1855.	Dr. H. A. Ackley, America.	Not given.	No account of duration, &c.	Not stated.	Not given.	Not stated.	O cy
2.	Not given.	Anonymous, America.	30.	Married.	Not stated.	Not given.	Universal.	I ova
3.	Not given.	Anonymous, America.	35.	Married.	Not mentioned.	Not given.	Not stated.	Ex ov
4.	August 8th, 1848.	Mr. J. Y. Arrowsmith, Shrewsbury.	Not given.	Married. Aborted, March 29th, 1848, at the third month; tapped once.	Not stated.	Long.	Not mentioned.	Mo ov
5.	1846.	Dr. J. L. Atlee, America.	33.	No account of duration, &c.	Not stated.	Large.	Slight.	Ova we 4
6.	March 29th, 1844.	Dr. W. L. Atlee, Philadelphia, America.	61.	Constitution very feeble; married; menses ceased at forty; disease stated to be of more than twenty years duration; abdomen as large as at full term of pregnancy; tapped twice on both sides.	Not stated.	Two inches above the umbilicus to the pubis.	None.	Bi ov we 25 l d di
7.	February 6th, 1850.	Dr. W. L. Atlee, Philadelphia, America.	30.	Unmarried.	Anæsthesia produced.	From one inch above the umbilicus to the pubis.	Extensive.	Cy ov we l

COMPLETED OVARIOTOMY.

ıgs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through perito-neum.	Symptoms of reaction; time and cause of death.	Source of information.
uffered severely from the ed by the operation. Tu-ved.	Not stated.	Not mentioned.	Died on the third day from hæmorrhage, the result of undue traction in attempting to secure the pedicle external to the abdominal cavity.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
emoved.	Not stated.	Not mentioned.	Death in twenty-four hours from loss of blood, and shock.	Lyman's Report, 1856, case 29.
emoved.	Not stated.	Not mentioned.	Death within a week from peritonitis.	Lyman's Report, 1856, case 30.
emoved.	Not stated.	Not mentioned.	Died on the third day from peritoneal inflammation and exhaustion.	Kindly communicated by the operator.
emoved.	Not stated.	Not mentioned.	Died from pneumonia on the fifteenth day. No peritonitis found after death.	Lyman's Report, 1856, case 5.
ɔur of the left ovary re-dicle tied with three liga-ree divisions; the cyst of vary not removed, as the und involved in the pedicle.	Not stated.	Not mentioned.	Death from peritonitis on the sixth day.	*American Journal of Medical Sciences*, July, 1844, and April, 1855.
ıd, strong, vascular cords yst to the recto-vaginal *cul* uiring ligatures. Tumour	Not stated.	Not mentioned.	Death from peritonitis on the sixth day, owing to imprudence in diet.	*American Journal of Medical Sciences*, April, 1855.

No. of case.	Date of th opera tion	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision	Adhesions.	
8.	March 19th, 1850.	Dr. W. L. Atlee, Philadelphia, America.	40.	Married. Much enfeebled; ascites present; tapped five times; lower extremities ulcerated and anasarcous; the operation was performed with the hope of arresting the progress of approaching death.	Anæsthesia produced.	From one inch above the umbilicus to the pubis.	With the omentum, uterus, &c.	C o w
9.	April 16th, 1851.	Dr. W. L. Atlee, Philadelphia, America.	29.	Married.	Anæsthesia produced.	From near the sternum to pubis.	Firm and extensive.	C o
10.	May 31st 1852.	Dr. W. L. Atlee, Philadelphia, America.	20.	Unmarried. Exceedingly feeble; mouth and throat aphthous; rapid emaciation; patient urgent for the operation.	Anæsthesia produced.	From near the umbilicus to pubis.	Firm and extensive.	C ov qu cer wi flu
11.	August 16th, 1852.	Dr. W. L. Atlee, Philadelphia, America.	30.	Married. Greatly prostrated and emaciated; was kept constantly under the use of morphia; tumour of five months duration.	Anæsthesia produced.	From near the umbilicus to pubis.	Universal	R m a la u re ta off
12.	July 13th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	31.	Unmarried.	Anæsthesia produced.	From umbilicus to pubis.	Strong and extensive to the pelvis.	ov fo
13.	September 30th, 1854.	Dr. W. L. Atlee, Philadelphia, America.	59.	Married.	Anæsthesia produced.	Six inches.	Firm and extensive.	I ri le cy fi vi ha w m
14.	October 31st, 1854.	Dr. W. L. Atlee, Philadelphia, America.	42.	Married.	Anæsthesia produced.	From six to eight inches.	Firm and extensive.	

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
lons of ascitic fluid evacuour removed. The omend spread over the cyst.	Not stated.	Not mentioned.	Death on the third day from exhaustion.	*American Journal of Medical Sciences*, April, 1855.
large cyst filled with pared crassamentum could inished by tapping; the oved.	Not stated.	Not mentioned.	Death on the third day from peritonitis.	*American Journal of Medical Sciences*, April, 1855.
tion afforded entire relief and added much to her he tumour removed.	Not stated.	Not mentioned.	Death from exhaustion in thirteen hours.	*American Journal of Medical Sciences*, April, 1855.
ies removed.	Not stated.	Not mentioned.	Death from exhaustion in about nine hours.	*American Journal of Medical Sciences*, April, 1855.
ries removed.	Not stated.	Not mentioned.	Death on the fifth day from exhaustion and disease of the stomach and ileum.	*American Journal of Medical Sciences*, April, 1855.
aries and an independent ur removed.	Not stated.	Not mentioned.	Death on the fifth day from hæmorrhage, source not stated.	*American Journal of Medical Sciences*, April, 1855.
emoved.	Not stated.	Not mentioned.	Death on the sixth day from hæmorrhage, source not stated.	*American Journal of Medical Sciences*, April, 1855.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of adminstration and preparations employed	Length of the incision.	Adhesions.	No. of Tu
15.	May 7th, 1851.	Mr. Alfred Baker, Birmingham.	18.	Unmarried. Enlargement of abdomen first noticed at twelve years of age.	Chloroform administered	Two inches.	Thready to parietes and extensive to contiguous viscera.	Ov cy
16.	1852.	Dr. Bardeleben, Greifswalde.	50.	Disease had existed for ten years. The patient much broken down, and urgently desired the operation to be performed.	Not stated.	Two and a half inches.	Numerous to pelvis, and one to the small intestine.	C sare the The the s consi cel care
17.	1852.	Dr. Bartscher, Osnabrück.	49.	Had one child. Disease of one year and a half's duration; considerable distension of the abdomen. The condition of the patient had kept up remarkably well; appetite good. Tapped once.	Not stated.	Four inches, afterwards enlarged.	With the ascending colon.	O cysti right 11 we
18.	September 5th, 1851.	Dr. Baum, Göttingen.	24.	Unmarried. A tumour in the abdomen observed for eight years. Tapped twice. Patient thin and weak, in other respects healthy.	Chloroform administered	Two and a half to three inches.	None.	Sim of t ov
19.	January 18th, 1856.	Dr. Baum, Göttingen.	30.	Unmarried. The disease of nearly four years duration. Tapped once. Conditions for operating very favourable. Menses regular. Digestive disturbances; abdomen painful.	Chloroform administered	Two and a half to three inches.	None.	Sim of th ovar case dep
20.	January 15th, 1853.	Dr. Bayless, America.	20.	Married; had two children, one seven, the other five years old. Tumour of four years duration.	Not stated.	Six inches.	To the peritoneum and fimbriated extremity of the Fallopian tube.	Mult ova
21.	June, 1851.	Dr. Ezra Bennett, America.	52.	Married; had two children. Tumour of two years duration. Tapped twice in six weeks, a few months before the operation.	Not stated.	Not given.	To the parietes.	Lar tile ova

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
red; sickness; cyst pro- the edges of the wound; separated. In conse- morrhage, four or five Tumour removed.	Not stated.	Not mentioned.	Died twenty-six hours after the operation, from hæmorrhage.	Dr. R. Lee's Tables.
of the adhesions very drawing out the sac the l intestine followed and with great difficulty. emoved.	Not stated.	Not mentioned.	Death after twenty-four hours, from exhaustion.	Scanzoni's *Beiträge*, 1858; Simon's Table.
was found after a some- separation of the adhe- edicle was tied in three e tumour removed.	Not stated.	Not mentioned.	Death in six hours after the operation, from hæmorrhage.	Scanzoni's *Beiträge*, 1858; Simon's Table.
ctured. The pedicle was ied in two portions and excised. The ligatures t the lower angle of the peration occupied twen- s.	Within.	By sutures.	Death on the fifth day from peritonitis. Serous effusion also into the pleural and pericardial cavities.	*Monatsschrift für Geburtskunde*, August, 1859, p. 124.
ctured after the incision, rward by threads intro- usly to tapping, and ex- edicle pierced and tied in and sewn into the wound.	Stitched into the wound.	By sutures.	Death on the thirteenth day from peritonitis.	*Monatsschrift für Geburtskunde*, August, 1859, p. 134.
tapped. The fimbriated the Fallopian tube was n the tumour, ligatured, A ligature was placed pedicle and the tumour	Not stated.	Not mentioned.	Died in twenty and a half hours, in consequence of hæmorrhage from the external incision.	Dr. Lyman's Report, Boston, 1856, case 82.
moved.	Not stated.	Not mentioned.	Died on the fourth day from exhaustion. No signs of inflammation.	Dr. Lyman's Report, Boston, 1856, case 72.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nature of the tumour
22.	December 29th, 1849.	Dr. H. J. Bigelow, America.	22.	Tumour of one year's duration; ascites present also. Tapped twice, and ropy, transparent fluid drawn.	Not stated.	From umbilicus to the pubes.	Slight.	Multilocular ovarian tumour, weighing 8 lbs; uterine tumour weighing 2 lbs.
23.	Not given.	Dr. P. Bird, London.	Not given.	Unmarried. (Miss D.)	Not stated.	Not given.	Slight.	Large ovarian
24.	Not given.	Dr. P. Bird, London	Not given.	Married. (Mrs. L.) Tumour bound down in the pelvis, causing unceasing suffering; tapping required every ten or twelve days.	Not stated.	Not given.	Slight.	Ova
25.	Not given.	Dr. P. Bird, London.	Not given.	Married. (Mrs. G.)	Not stated.	Not given.	None.	Ova
26.	Not given.	Dr. P. Bird, London.	Not given.	No account.	Not stated.	Not given.	Not mentioned.	Large complicated ovarian
27.	October 5th, 1856.	Dr. Black, Chesterfield.	49.	Married; had three children. Menstruation regular; had ovaritis twice; disease noticed first about nine months; treated medicinally, which resulted in the fluid portion of the disease being removed six times; respiration became at length so much oppressed, that tapping became necessary; much prostrated by the operation, and the relief from the tapping being of short duration, extirpation of the tumour was resolved upon.	Chloroform administered	Three inches above the umbilicus to the pubes.	To omentum and to parietal peritoneum.	Multilocular cystic right ovarian 29
28.	1856.	Dr. G. C. Blackman, America.	Not given.	Patient was greatly emaciated.	Not stated.	Not given.	Slight.	Ova weighing about
29	1859.	Dr. G. C. Blackman, America.	Not given.	Patient had been tapped some eight or ten times.	Not stated.	Not given.	Extensive	Ulti ova wei 20

)f and accidents during ıe operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
re tapped, the adhesions :he tumour of the left l. A small fibrous tu- :erus removed also.	Not stated.	Not mentioned.	Died on the third day; cause of death not stated.	Dr. Lyman's Report, Boston, 1856, case 84.
ıoved.	Not stated.	Not mentioned.	Died on the third day; cause of death not stated.	*Lancet*, 1850, vol. ii.
ıoved.	Not stated.	Not mentioned.	Died on the third day; cause of death not stated.	*Lancet*, 1850, vol. ii.
ıoved.	Not stated.	Not mentioned.	Died on the fifth day; cause of death not stated.	*Lancet*, 1850, vol. ii.
ıoved.	Not stated.	Not mentioned.	Died at the end of the week; cause of death not stated.	*Lancet*, 1850, vol. ii.
tic fluid escaped on the made; cyst punctured; ıture was then passed :dicle, and tied firmly, r excised.	Not stated.	By interrupted sutures, adhesive straps, and a bandage.	Cough and increased respiration came on six hours after the operation. The chest symptoms increased, and resisted all treatment. Death took place four days after the operation. The lungs were found engorged and congested; bronchial mucous membrane almost completely destroyed. No peritonitis.	*Lancet*, 1857, pp. 110 & 138.
ıoved.	Not stated.	Not mentioned.	Death forty-eight hours after the operation, from exhaustion.	Hamilton's Report, *op. cit.*
ıoved.	Not stated.	Not mentioned.	Died from peritonitis sixty-one hours after the operation.	Hamilton's Report, *op. cit.*

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
30.	Not given.	Dr. J. J. Bradford, America.	Not given.	No account.	Not stated.	Not stated.	Not stated.	m
31.	Not given.	Mr. I. Baker Brown, London.	27.	Disease appeared while single; treated by tapping and pressure with success; tapped again and then married; gave birth to a child which she nursed twelve months; tapped twice, and subsequently as the cysts rapidly filled, extirpation was determined upon; tumour of six years duration.	Chloroform administered	Four inches, afterwards considerably enlarged.	Slight.	M cor th
32.	May 20th, 1852.	Mr. I. Baker Brown, London.	23.	Married; no children. Generally had good health; exploring needle used, and fluid withdrawn; contained cholestrine; menses regular; tumour of two years duration; abdomen enormously distended.	Chloroform administered	Three inches, afterwards enlarged.	Strong, anteriorly.	cy soli
33.	June 16th, 1852.	Mr. I. Baker Brown, London.	29.	Married; had one child. Disease noticed fifteen months previously for the first time; health generally good; catamenia regular.	Chloroform administered	From a little above umbilicus to nearthe pubis.	Slight to omentum.	Mu ova w ll
34.	July 1st, 1852.	Mr. I. Baker Brown, London.	37.	Married. Tapped seven times; the abdomen greatly distended; in a very feeble condition; disease had existed nine years.	Chloroform administered	Eight inches.	Extensive, and one long and cylindrical.	Mu ova wh th w
35.	September 29th, 1852.	Mr. I. Baker Brown, London.	31.	Unmarried. Hysterical; menstruation regular though painful; enlargement first perceived in 1851; was under treatment until September 1852, when she was first tapped; filled again very rapidly; the lower extremites œdematous, and there was a good deal of ascites.	Chloroform administered	Four inches.	Moderate.	Mu ova

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
moved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859, case 6.
brought to view tapped; enlarged, and a second ed; pedicle common to sts tied by a double liga- tumour excised.	Not stated.	Not mentioned.	Slight peritonitis supervened and patient died on the third day, apparently more from exhaustion than inflammation.	Brown on the *Surgical Diseases of Women*, p. 256, and kindly revised by the operator.
st tapped, fluid contained another cyst brought to was evacuated. An ap- mass was also found occu- dvic cavity, all of which d. Pedicle pierced and ortions. Ligatures brought wer part of the wound.	Within.	By deep interrupted sutures, and by finer superficial ones.	Collapse on the second day from hæmorrhage. After death, cavity of peritoneum was found to contain about 40 oz. of dark clotted blood.	Brown on the *Surgical Diseases of Women*, p. 257, case 55; and kindly revised by the operator.
ctured. The adherent as dissected off the cyst, l ligatured. The pedicle and tied in three portions, our removed.	Within.	Wound closed by fourteen deep and four superficial sutures.	Ligature of pedicle came away on the 6th of July; on the 11th had hæmorrhage; also, towards the last, symptoms of tetanus. Died from extensive peritonitis on the 12th of July.	Brown on the *Surgical Diseases of Women*, case 58, p. 263; and kindly revised by the operator.
as ligatured and tumour	Within.	Not stated.	Died on the fifth day from peritonitis.	Brown on the *Surgical Diseases of Women*, case 56, p. 259; and kindly revised by the operator.
ge arteries which were ing the incision of the arietes required ligatures. were evacuated before the ld be withdrawn. The so thick as to require to hree portions. Tumour	Without.	By deep and superficial interrupted sutures. Peritoneum not pierced.	Sickness after the operation, succeeded by great flatulence; pain and tenderness; and bled to 12 oz., with temporary relief, but she died in thirty-two hours, with every symptom of violent peritonitis, which was proved after death.	The particulars kindly communicated by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nature of the tumour
36.	April 6th, 1854.	Mr. I. Baker Brown, London.	37.	Married; had two children. Tumour of two years duration; six months previously was much prostrated, also had loss of appetite and strength; tried change of air by which she was much benefited; urgently desired the operation to be performed.	Chloroform administered	Three and a half inches.	Slight anteriorly, but at the upper part and sides very strong.	Fibro-ovarian
37.	March 7th, 1856.	Mr. I. Baker Brown, London.	30.	Unmarried. Enlargement of abdomen had been perceived for four years, and during the last few months had been very rapid; she was tapped on January 24th, 1856, and two cysts emptied of a clear non-albuminous fluid; rapidly refilled, and wasted much; no œdema of legs.	Chloroform administered	Three inches.	None.	Multiple ovarian
38.	February 10th, 1859.	Mr. I. Baker Brown, London.	21.	The disease commenced in her 11th year; in 1857 had a fall followed by much pain, and fluid gradually collected in the abdomen; had never menstruated; general health bad; hymen perfect; sent to the operator from Germany.	Chloroform administered	From navel to near the pubes.	Slight with the omentum.	Multiple ovarian containing matter, bone, [illegible] forceps
39.	February 24th, 1859.	Mr. I. Baker Brown, London.	35.	A French lady; married about fourteen years. Tapped repeatedly; had four children. Disease co-existent with ascites and general anasarca. Had been a hard drinker for many years.	Chloroform administered	Seven inches.	Few but strong, one to the liver.	Multiple ovarian
40.	April, 1859.	Mr. I. Baker Brown, London.	35.	Unmarried. For several years has had indigestion, and for the last two years great wasting of the neck and shoulders with increase in size of abdomen; an exploratory puncture showed the fluid to be very thick and albuminous.	Chloroform administered	Five inches.	Strong to colon and bladder.	Multiple ovarian
41.	May 16th, 1859.	Mr. I. Baker Brown, London.	23.	Unmarried. The disease had made its appearance about three years, and a violent attack of peritonitis had affected her system so much, that the operator placed her upon a course of iron and generous diet for some months before she was in a fit state for an operation.	Chloroform administered	Four inches.	Moderate.	Multiple ovarian

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
was punctured. After tes manipulation all the ere broken down. Not rhage. The pedicle was ortions, and retained ex- eans of a director placed across the abdomen. oved.	Without.	By four deep and two superficial interrupted sutures.	Had obstinate sickness, which was relieved by ammonia and hydrocyanic acid; sickness again returned and creosote administered. Rapidly sank from peritonitis on the ninth day.	Brown on the *Surgical Diseases of Women*, p. 280; and kindly revised by the operator.
of fluid withdrawn before ld be brought out. Pe- two portions and tumour e other ovary had one to it, as well as a vascu- malignant character, not be removed.	Without.	Four deep and two superficial sutures. Peritoneum not pierced.	Died forty-eight hours after the operation, more from the shock than anything else. After death a small abscess was found in the liver; and colon strongly adherent to the broad ligament. Peritoneum slightly injected, but no lymph.	The particulars kindly communicated by the operator.
its punctured. Uterus at with the tumour, and ion showed that its fundus ed with the cervix only ious membrane. Clamp edicle confined by it at nd of the wound. The oved.	Without by clamp.	Iron wire sutures, not including the peritoneum.	Symptoms of peritonitis came on, collapse supervened, and she died seventeen hours after the operation. After death a good deal of peritonitis was found, chiefly on the left side. Heart small and flabby; liver adherent to diaphragm.	*British Medical Journal*, May 28th, 1859; and kindly revised by the operator.
ision being made into the orty-five pints of fluid es- s punctured. One band of tained large vessels which ecured. Pedicle secured and retained at the lower cision. The tumour re-	Without by clamp.	Iron wire sutures used.	Incessant vomiting of bile for three days. Died from disease of the liver, which was found after death to be much softened. But little evidence of peritonitis.	*British Medical Journal*, June 4th, 1859; and kindly revised by the operator.
l of ascitic fluid escaped domen was opened. The hort and thick, and there ficulty in drawing it out. removed.	Retained without with callipers.	Deep interrupted wire sutures, not passing through the peritoneum.	During the first twenty-four hours was much depressed. The pulse became very rapid, and symptoms of peritonitis came on. She died in fifty-two hours.	The particulars kindly communicated by the operator.
s successively presented and were emptied during n. There was very little drawing out the mass, nally removed.	Retained without with callipers.	Deep interrupted wire sutures, not passing through the peritoneum.	She went on very well indeed until the sixth day, when violent diarrhœa set in and she died from the exhaustion on the seventh day.	The particulars kindly communicated by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
55.	March 10th, 1843.	Dr. Clay, Manchester.	Not given.	Married. Had been frequently tapped for ovarian dropsy; the walls of the sac and abdomen had become adherent, and thinned, so that when the sac became distended it burst spontaneously beneath the umbilicus; much emaciation; anxious for an entire removal of the disease.	Not used.	Not given.	Extensive.
56.	Not stated.	Dr. Clay, Manchester.	51.	Married. Extremely emaciated; disease of sixteen years duration; tapped; much prostrated; urgently wished for the operation; had scarcely the common necessaries of life for the last two years.	Not used.	Not given.	To the abdominal parietes.
57.	August 30th, 1843.	Dr. Clay, Manchester.	40.	Married; had never been pregnant. Disease had existed a considerable time; menstruation irregular; fat and pale, considered by the operator conditions not favourable for ovariotomy.	Not used.	Not given.	Considerable to the anterior abdominal parietes.
58.	November 9th, 1846.	Dr. Clay, Manchester.	26.	Pale and inclined to obesity; disease of three or four years duration, and had been subject to almost every kind of treatment without benefit; urgently desired the performance of the operation; tapped once.	Not used.	Not given.	None.
59.	1847.	Dr. Clay, Manchester.	27.	Married.	Chloroform administered	Not given.	Not mentioned.
60.	June 14th, 1848.	Dr. Clay, Manchester.	47.	Married. Disease existed five or six years; tapped, and 40 lbs. of fluid removed; reduced to the utmost verge of debility, and was very difficult to control as to her habits, &c.	Chloroform administered	Not given.	Moderate to the anterior abdominal walls.
61.	1848.	Dr. Clay, Manchester.	19.	Unmarried.	Chloroform administered	Not given.	Not mentioned.
62.	1848.	Dr. Clay, Manchester.	35.	Married. Ascites present.	Chloroform administered	Not given.	Not mentioned.

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
ions were easily broken large cyst and several required emptying. Tued.	Retained without with callipers.	Deep interrupted wire sutures not passing through the peritoneum.	Sickness came on succeeded by a good deal of tympanitis with pain over the whole abdomen. This did not yield to treatment, and she died from a low form of peritonitis and fever with symptoms of pyæmia on the ninth day.	The particulars kindly communicated by the operator.
ions were broken down. st emptied, and then the ller ones was easily with- vessels in the adhesions reely and ligatures were ich were brought out at d of the wound. Tumour	Retained without with callipers.	Deep interrupted wire sutures not passing through the peritoneum.	Six hours after the operation burning pain in bowels came on, followed by sickness and she sank twenty-four hours after the operation. After death peritoneum found much injected; kidney slightly degenerated.	The particulars kindly communicated by the operator.
easily separated. Pedicle single ligature. No ae- operation, which lasted fifteen minutes only. slight.	Not stated.	Not mentioned.	Very severe reaction. Death in four weeks from peritonitis.	Scanzoni's *Beiträge*, 1858; Simon's Table.
moved.	Not stated.	Not mentioned.	Died from hæmorrhage on the third day.	Hamilton's Report, *op. cit.*
ior tumour protruded as bdomen was opened, and its pedicle being attached one. The lower tumour ed out of the pelvis, and oved. The left ovary was d, being in a diseased pedicle was tied in four	Not stated.	Not mentioned.	The patient died from peritonitis on the sixth day.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
e was transfixed and tied ns. A separate ligature lied, and the tumour re- ccident in the operation, mpleted in five minutes.	Not stated.	Not mentioned.	Death on the fifth day from exhaustion.	Bühring *Die Heilung der Eierstock-Geschw.* Berlin, 1848, p. 33.
noved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, 1859, case 4.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
55.	March 10th, 1843.	Dr. Clay, Manchester.	Not given.	Married. Had been frequently tapped for ovarian dropsy; the walls of the sac and abdomen had become adherent, and thinned, so that when the sac became distended it burst spontaneously beneath the umbilicus; much emaciation; anxious for an entire removal of the disease.	Not used.	Not given.	Extensive.
56.	Not stated.	Dr. Clay, Manchester.	51.	Married. Extremely emaciated; disease of sixteen years duration; tapped; much prostrated; urgently wished for the operation; had scarcely the common necessaries of life for the last two years.	Not used.	Not given.	To the abdominal parietes.
57.	August 30th, 1843.	Dr. Clay, Manchester.	40.	Married; had never been pregnant. Disease had existed a considerable time; menstruation irregular; fat and pale, considered by the operator conditions not favourable for ovariotomy.	Not used.	Not given.	Considerable to the anterior abdominal parietes.
58.	November 9th, 1846.	Dr. Clay, Manchester.	26.	Pale and inclined to obesity; disease of three or four years duration, and had been subject to almost every kind of treatment without benefit; urgently desired the performance of the operation; tapped once.	Not used.	Not given.	None.
59.	1847.	Dr. Clay, Manchester.	27.	Married.	Chloroform administered	Not given.	Not mentioned.
60.	June 14th, 1848.	Dr. Clay, Manchester.	47.	Married. Disease existed five or six years; tapped, and 40 lbs. of fluid removed; reduced to the utmost verge of debility, and was very difficult to control as to her habits, &c.	Chloroform administered	Not given.	Moderate to the anterior abdominal walls.
61.	1848.	Dr. Clay, Manchester.	19.	Unmarried.	Chloroform administered	Not given.	Not mentioned.
62.	1848.	Dr. Clay, Man- ches	25.	Ma[illegible] present.	Chloroform administered	Not given.	Not mentioned.

ns of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
ed. Hæmorrhage followed on of adhesions, and a portum about the size of the of the hand was removed. was pierced and tied in , and the tumour excised.	Within.	Not carried through the abdominal parietes.	Progressed favourably up to the 17th, when an uncontrollable diarrhœa supervened, from which she died eight days after the operation.	*Medical Circular*, December 30th, 1857; and kindly revised by the operator.
road but thin. Tumour contained four pints of ick fluid. The omental re separated, but those of es could not be divided. removed.	Secured by a clamp outside the abdominal cavity.	Wound closed by wire sutures, not including the peritoneum.	Death occurred from peritonitis on the fourth day. There were also œdema of the lungs and effusion into the pleura found after death.	*Medical Times and Gazette*, December 11th, 1858; and kindly revised by the operator.
urs after the operation parent, supposed to be rrhage, and a ligature w the clamp to restrain it. was removed.	Secured by a clamp external to the abdominal cavity.	Wound closed by wire sutures, not including the peritoneum.	Death twenty-two hours after the operation, from internal hæmorrhage; this was owing to the thin external third of the divided pedicle escaping from the grasp of the clamp at its apex and slipping back into the abdomen.	*Medical Times and Gazette*, February 26th, 1859; and kindly revised by the operator.
oneum being opened the nd intestines protruded. artly separated with the e and partly with the e pedicle was tied with s and the tumour excised. orrhage from branches of ric artery, two of which Ligatures brought out at f the wound.	Within.	By sutures.	Death after thirty-six hours, from peritonitis.	*London Medical Gazette*, February 28th, 1859.
oneum being opened the rotruded, and three quarts yellow colour were evacuions divided by the scalpel. inches thick was excised plication of a double liga-	Not stated.	Not mentioned.	Death after thirty-six hours, from peritonitis.	*London Medical Gazette*, February 28th, 1859.
were passed around the onnections as well as the chment; the parts were and the tumour removed.	Not stated.	Not mentioned.	Death one and a half hours after the operation, from hæmorrhage. The ligatures proved insufficient to arrest the hæmorrhage.	*Results of Ovariotomy, &c.*, 1848.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
55.	March 10th, 1843.	Dr. Clay, Manchester.	Not given.	Married. Had been frequently tapped for ovarian dropsy; the walls of the sac and abdomen had become adherent, and thinned, so that when the sac became distended it burst spontaneously beneath the umbilicus; much emaciation; anxious for an entire removal of the disease.	Not used.	Not given.	Extensive.
56.	Not stated.	Dr. Clay, Manchester.	51.	Married. Extremely emaciated; disease of sixteen years duration; tapped; much prostrated; urgently wished for the operation; had scarcely the common necessaries of life for the last two years.	Not used.	Not given.	To the abdominal parietes.
57.	August 30th, 1843.	Dr. Clay, Manchester.	40.	Married; had never been pregnant. Disease had existed a considerable time; menstruation irregular; fat and pale, considered by the operator conditions not favourable for ovariotomy.	Not used.	Not given.	Considerable to the anterior abdominal parietes.
58.	November 9th, 1846.	Dr. Clay, Manchester.	26.	Pale and inclined to obesity; disease of three or four years duration, and had been subject to almost every kind of treatment without benefit; urgently desired the performance of the operation; tapped once.	Not used.	Not given.	None.
59.	1847.	Dr. Clay, Manchester.	27.	Married.	Chloroform administered	Not given.	Not mentioned.
60.	June 14th, 1848.	Dr. Clay, Manchester.	47.	Married. Disease existed five or six years; tapped, and 40 lbs. of fluid removed; reduced to the utmost verge of debility, and was very difficult to control as to her habits, &c.	Chloroform administered	Not given.	Moderate to the anterior abdominal walls.
61.	1848.	Dr. Clay, Manchester.	19.	Unmarried.	Chloroform administered	Not given.	Not mentioned.
62.	1848.	Dr. Clay, Manchester.	35.	Married. Ascites present.	Chloroform administered	Not given.	Not mentioned.

ıgs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
ation was one of great dif- the tumour was eventu- ɔd.	Within.	Not stated.	She awoke from her sleep in a fright, the result of a dream. A large amount of blood escaped from the wound, and on applying traction the ligature was found thrown off the pedicle. She died twenty-seven hours after the operation, from hæmorrhage.	*Results of Ovariotomy, &c.*, 1848, p. 32.
emoved in less than twelve	Not stated.	Not mentioned.	The case appeared to do well for the first twelve hours, but she died in thirty-six hours, from exhaustion.	*Results of Ovariotomy*, 1848, case 18, p. 52.
sions not being of long ere easily separated with- of the scalpel.	Not stated.	Not mentioned.	The case progressed well for the first twelve hours, but she died on the second day, from peritonitis.	*Results of Ovariotomy*, 1848, p. 52.
l solid mass were removed.	Not stated.	Not mentioned.	Died on the tenth day, from a second attack of inflammation. A prior attack had been subdued.	*Results of Ovariotomy*, 1848, p. 53.
emoved.	Not stated.	Not mentioned.	Died on the ninth day, from exhaustion.	*Results of Ovariotomy*, 1848, p. 55.
t supposed to be adherent ior walls of the abdominal exploratory incision made but in consequence of ad- eration abandoned. An ıade lower down, three rwards, and tumour found om adhesions at that part. r was then extirpated in a .	Not stated.	Not mentioned.	Died on the sixth day, exhaustion having rapidly supervened.	*Results of Ovariotomy*, 1848, p. 54.
emoved.	Not stated.	Not mentioned.	Died within twenty-four hours, from shock and exhaustion.	*Results of Ovariotomy*, 1848, p. 55.
emoved.	Not stated.	Not mentioned.	Died on the third day. Cause of death not stated.	*Results of Ovariotomy*, 1848, p. 55.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
63.	1848.	Dr. Clay, Manchester.	18.	Unmarried.	Chloroform administered	Not given.	Not mentioned.	O w
64.	1848.	Dr. Clay, Manchester.	35.	Married.	Chloroform administered	Not given.	Not mentioned.	Ov 20lb
65.	October, 1850.	Dr. Clay, Manchester.	35.	Single.	Chloroform administered	Not given.	Not mentioned.	O in
66.	February, 1851.	Dr. Clay, Manchester.	45.	Married. Been tapped ten times; great exhaustion previously to the operation; only fourteen days interval between each tapping.	Chloroform administered	Not given.	Not mentioned	O in
67 to 82.	From February, 1851 to January, 1860.	Dr. Clay, Manchester.	Ages not given.	None were of less than one year's duration, generally of three or four years growth, and some of very many years standing; nearly all were much emaciated, and speedy death imminent; and all were desirous for the operation to be performed.	Chloroform administered in all the cases.	Always proportionate according to the size of the tumour; always the major incision sufficiently large at first for easy manipulation.	Moderate in about one-third; extensive in about one-third; and extensive and firm in one-third of the cases.	Of the un ca o we cy ni mu n n
83.	November 3rd, 1843.	Mr. Bransby B. Cooper, London.	32.	Married; never pregnant. Catamenia appeared at sixteen years, but always irregular. Disease of about five years duration. Tumour disappeared spontaneously; in eighteen months it increased, and again disappeared; in thirteen months it refilled, and she was tapped; and again in thirteen months. General health good.	Not used.	From near the ensiform cartilage to pubes.	Slight.	M c ri dis u co

ıgs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through perito-neum.	Symptoms of reaction; time and cause of death.	Source of information.
emoved.	Not stated.	Not mentioned.	Died in thirty-six hours, partly from shock and partly from exhaustion.	*Results of Ovariotomy*, 1848, p. 55.
emoved.	Not stated.	Not mentioned.	Died from inflammation, on the third day.	*Results of Ovariotomy*, 1848, p. 56.
emoved with great facility.	Not stated.	Not mentioned.	Inflammation and subsequent obstruction of the bowels, from which she died on the ninth day.	Dr. Lee's Table, case 150.
emoved.	Not stated.	Not mentioned.	Died on the second day. Cause of death not stated.	Dr. R. Lee's Table, case 154.
ours were removed in all he adhesions when present lly separated with the hand, the scalpel; the cyst was in some cases before the the tumour after the in-sen its bulk, and the pedicle d tied in two or more when too thick for one secure.	The pedicle is never left in the abdominal cavity, only the remains of it; that portion beyond the ligature remaining, is but its attachment to the uterus.	Always by interrupted sutures, adhesive straps, and bandages, but sutures not passed through the peritoneum.	Of these unsuccessful cases, and those detailed (twenty-nine) *ten* died from peritonitis, *five* from hæmorrhage, and *fourteen* from exhaustion.	The particulars of these cases kindly communicated by Dr. Clay to the reporter.
sions easily broken down; hæmorrhage; tumour anced; pedicle pierced and portions, and the tumour	Not stated.	By fifteen interrupted sutures, adhesive straps, and roller.	Symptoms of peritonitis supervened, of which she died on the seventh day.	*Medico-Chirurgical Transactions*, vol. xxvii, p. 78.

No. of Case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Adhesions.	
63.	1848.	Dr. Clay, Manchester.	18.	Unmarried.	Chloroform administered.	Not given.	Not mentioned.	
64.	1848.	Dr. Clay, Manchester.	35.	Married.	Chloroform administered.	Not given.	Not mentioned.	
65.	October, 1850.	Dr. Clay, Manchester.	35.	Single.	Chloroform administered.	Not given.	Not mentioned.	
66.	February, 1851.	Dr. Clay, Manchester.	45.	Married. Been tapped ten times; great exhaustion previously to the operation; only fourteen days interval between each tapping.	Chloroform administered.	Not given.	Not mentioned.	
67 to 82.	From February, 1851, to January, 1868.	Dr. Clay, Manchester.	Ages not given.	None were of less than one year's duration, generally of three or four years growth, and some of very many years standing; nearly all were much emaciated, and speedy death imminent; and all were desirous for the operation to be performed.	Chloroform administered in all the cases.	Always proportionate accordingly to the size of the tumour; always the major incision sufficiently large at first for every	Moderate in about one-third; extensive in about one-third; and extensive and firm in one-third of the cases.	
83.	November 3rd, 1863.	Mr. Bransby B. Cooper, London.	32.	Married; never pregnant. C menis appeared at sixteen; but always irregular. Disc about five years duration. T disappeared spontaneous eighteen months it increas again disappeared; in months it refilled, and tapped; and again in months. General health				

of and accidents during e operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
e force requisite to over- esions; three ligatures o the omental adhesions ; several cysts tapped n order to diminish the nour; tied parts of the ought out external to m, and the tumour	Secured by a clamp external to the abdominal cavity.	By deep sutures of silk and wire alternately.	Died about twenty-four hours after the operation, somewhat suddenly. After death a considerable quantity of bloody serum was found in the cavity of the peritoneum, but no signs of actual peritonitis.	*Medical Times and Gazette*, March 3rd, 1860.
ature was placed around d each vessel tied sepa- d the tumour removed.	Not stated.	Not mentioned.	Died on the twelfth day from peritonitis.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 158.
tity of serous fluid eva- e peritoneal cavity. The tured, the contents dis- then excised. The pe- as the finger, was tied ature. Slight hæmorr- ure removed and the parately.	Not stated.	Not mentioned.	Death from peritonitis sixteen hours after the operation.	Simons's Table, *Scanzoni's Beitrage*, 1858.
ons were separated in h the hand, in one or h the knife, and had to consequence of hæmorr- could not be traced, igature was used as close the healthy parts and d above it.	Within.	Closed with stitches and adhesive straps.	Recovered from the effects of the chloroform, and was comfortable; she became restless, had fainting attacks, irregular respiration, and died in four and a half hours; cause of death not stated.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
oved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859.
oved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859.
oved.	Not stated.	Not mentioned.	Died on the seventeenth day after the operation, from diabetes.	Hamilton's Report, *op. cit.*

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
91.	1855.	Dr. A. Dunlap, America.	Not given.	Unmarried.	Not stated.	Not given.	Not mentioned
92.	1856.	Dr. A. Dunlap, America.	Not given.	Unmarried.	Not stated.	Not given.	Not mentioned.
93.	1856.	Dr. A. Dunlap, America.	Not given.	Married.	Not stated.	Not given.	Not mentioned.
94.	Not given.	Dr. A. Dunlap, America.	Not given.	Married.	Not stated.	Not given.	Not mentioned.
95.	October 22nd, 1856.	Dr. Edwards Edinburgh.	30.	Spine injured five years previously; had acute ovaritis within twelve months; legs œdematous. Tapped below umbilicus, but no fluid escaped; again tapped above navel, and three gallons of fluid drawn off. Strength failing rapidly.	Chloroform administered	From umbilicus to ensiform cartilage.	Slight, anteriorly.
96.	Not given.	Dr. Edwards Edinburgh.	Not given.	No account.	Not mentioned.	Not given.	Not mentioned.
97.	July 18th, 1848.	Dr. Elkington, Birmingham.	46.	Married; had five children. Tumour first perceived in 1830; stationary five years; had two children after its appearance. In 1838, after an illness, size of tumour diminished and remained so for six years, it then increased and operation determined upon.	Chloroform used with a handkerchief.	Ten to twelve inches.	Extensive to parietes and omentum.
98.	November 24th, 1858.	Mr. J. C. Erichsen, London.	28.	Unmarried. Catamenia irregular since last May. Tumour first noticed in May, 1855. Tapped twice. Health generally good. Increasing tumour caused great distress from pressing on the surrounding viscera.	Chloroform administered	Long.	One, four inches long to the omentum.
99.	Not given.	Dr. A. Evans, America.	Not given.	No account.	Not stated.	Not given.	Not stated.

gs of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
emoved.	Not stated.	Not mentioned.	Died from hæmorrhage.	Hamilton's Report, *op. cit.*
emoved.	Not stated.	Not mentioned.	The patient died ten days afterwards from inanition.	Hamilton's Report, *op. cit.*
emoved.	Not stated.	Not mentioned.	Died thirty-six hours after the operation, from peritonitis.	Hamilton's Report, *op. cit.*
emoved.	Not stated.	Not mentioned.	Patient died on the seventh day, from congestion of the brain.	Hamilton's Report, *op. cit.*
g the sheath of the rectus l arteries divided, which d; pedicle long and thin, e; free hæmorrhage from s; three vessels tied in the all; the tumour removed.	Within.	Wound stitched up.	Died six days afterwards, from effusion into the pleura. *Post mortem* not allowed.	*Edinburgh Medical Journal*, April, 1857.
emoved.	Not stated.	Not mentioned.	Cause of death not stated.	Further particulars could not be obtained.
occupied fifteen minutes; secured; pedicle tied by a ire; very little blood lost; removed.	Within.	Not stated.	Reaction in twelve hours. Died in thirty-seven hours. No *post mortem* allowed.	*Provincial Medical and Surgical Journal*, 1851, p. 439; and kindly revised by the operator.
antity of ascitic fluid opening the abdomen; d; the intestines were ecent peritonitis; two or ng points required liga- dicle was pierced and tied ures, which were secured probe, and the tumour	Within.	By uninterrupted sutures, eight silver probes, and straps of plaster.	Death from peritonitis five days afterwards.	*British Medical Journal*, January 15th, 1859.
emoved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, Kentucky, 1859.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Adhesions.	
100.	Not given.	Mr. Fletcher Walsall.	Not given.	No account.	Not stated.	Not given.	Not stated.	Ova
101.	February 5th, 1859.	Mr. Cooper Forster, London.	30.	Repeatedly tapped; much emaciated.	Chloroform given.	Four inches.	To the omentum.	Ov ova behi were smal
102.	May 1st, 1855.	Dr. George Fries, America.	Not given.	Six weeks previously patient had given birth to a two and a half months fœtus.	Not stated.	Ten inches.	Extensive to the parietes.	O cy
103.	Not given.	Dr. Gerson, Hamburgh.	Not given.	No account.	Not stated.	Not given.	Not mentioned.	O
104.	September 3rd, 1843.	Mr. T. M. Greenhow, Newcastle.	29.	Married. Suffered from menorrhagia, and the discharge became almost constant; tumour of eighteen months duration; pregnancy supposed to exist; tapped, and little else than blood escaped; her health improved and she became stronger; general health good.	Not stated.	From near the ensiform cartilage to near the pubis.	To the omentum.	cell part 12 in w th ci
105.	September 4th, 1850.	Dr. Grimshaw, America.	37.	Married; had several children since the disease began. Had a large ulcer in the umbilical region from distension; tapped eight times in eighteen months.	Not stated.	Twelve inches.	Slight.	Cy thi ova bl thi

s of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
moved.	Not stated.	Not mentioned.	Cause of death not stated.	Further particulars not given.
ured by clamp and the ved.	Without.	Sutures not through the peritoneum.	Died from collapse, twenty-four hours after the operation; peritonitis had set in.	*Medical Times and Gazette*, Feb. 26th, 1859; and kindly revised by the operator.
ons were such that it was sable to evacuate the ie sac to remain, and to tions to prevent the re- of the fluid. Tumour ly in spite of injections ilver, the wound opened, y of fœtid fluid escaped. rpation was again at- lhesions were easily se- the tumour removed. the pedicle brought out ion of the wound.	Within.	Not mentioned.	The wound did not unite, diarrhœa supervened, and patient died on the seventh day after the removal of the tumour.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859, Hamilton's Report.
r was removed.	Not stated.	Not mentioned.	Cause of death not stated.	Scanzoni's *Beiträge*, 1858, p. 140.
during the operation. lhesion divided by the pedicle pierced and tied ons and the tumour ex- rteries bled freely, which	Not stated.	Not mentioned.	Death on the sixth day, from peritonitis.	*Medico-Chirurgical Transactions*, vol. xxvii, p. 88.
d escaped on the incision Three ligatures applied le of the left ovary. A y of blood lost during the umour removed. The tumour not removed.	Not mentioned.	Not stated.	Died in five hours, from exhaustion.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 176.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
106.	June 19th, 1849.	Dr. Gross, America.	22.	Unmarried. Menses regular; tumour of eighteen months growth; tapped two weeks before the operation.	Not stated.	Three inches above umbilicus to pubes.	Slight.
107.	1834.	Dr. Groth, Bornhövd.	26.	Married; had several children. The disease had existed more than two years and a half; great distension of the abdomen, and very violent pains.	Not stated.	Six inches and a half long.	None.
108.	September 5th, 1845.	Dr. Handyside, Edinburgh.	20.	Unmarried. Tumour of twenty months duration; menses irregular; abdomen much distended; tapped ten times; the chest appeared healthy; had vomiting; general health notwithstanding generally good.	Not stated.	Large.	None.
109.	September 3rd, 1846.	Dr. Handyside, Edinburgh.	38.	Married; had five children. tapped four times; tumour of one year's duration.	Not stated.	Four inches.	None.
110.	February 17th, 1849.	Dr. Haartman, Helsingfors.	Middle age.	Married. Tumour of three years duration. General health always considerably deranged.	Not stated.	Five inches, parallel with Poupart's ligament.	None.
111.	1841.	Dr. Hayny, Jungbunzlau.	28.	Married; had children. The disease had existed five years. Tapped six times. Abdomen considerably distended.	Not stated.	Not given.	Slight, to the parietes and omentum.
112.	Not given.	Dr. Hergott, Strasbourg.	50.	Tumour scarcely observed until the circulation and respiration became affected. Never tapped; had never suffered from any apparent inflammatory symptoms.	Chloroform administered	Eight inches.	Numerous.

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
re was placed around the though tied with great me off after the removal r. A large artery was her ligature placed around and one of the divided esion which showed a bleed was ligatured also.	Not stated.	Not mentioned.	The menses appeared on the thirteenth day, and though the case had looked promising she died in four weeks from peritonitis.	Dr. Lyman's Report, Boston, 1856, case 175.
le, three quarters of an kness, was secured by a re. Small quantity of st in the operation.	Not stated.	Not mentioned.	Death sixteen hours after the operation, from hæmorrhage.	Simon's Table in Scanzoni's *Beiträge*, 1858.
ured, and a large quantity harged. The pedicle was tied in two portions and xcised. No hæmorrhage dicle. Right ovary was iseased, and this was re- one end of each of the g cut off, the other por- rought out at the lower wound.	Within.	By ten twisted sutures, but not carried through the peritoneum.	Had symptoms of pneumonia, and bled to twenty ounces. Died from peritonitis and phlebitis on the seventieth day. The adhesions had constricted the ileum, producing symptoms of strangulation.	Bennett's *Principles and Practice of Medicine*, p. 699; and kindly revised by the operator.
ries removed. The two uring the pedicles were rough the recto-vaginal d carried out per vaginam.	Within.	By twisted sutures, but not carried through the peritoneum.	Died from peritonitis; time of death not stated.	Kindly communicated by Dr. Handyside to the reporter.
le ligatured *en masse* and removed.	Not stated.	Not mentioned.	Died from peritonitis on the second day after the operation.	*Monatsschrift für Geburtskunde*, Focks' Table, p. 376 & 377.
long the border of the minal rectus muscle. the pedicle *en masse*. rrhage. Tumour removed.	Not stated.	Not mentioned.	Death forty-seven days after the operation, in consequence of the formation of an ichorous abscess.	Simon's Table, Scanzoni's *Beiträge*, 1858.
sion tumour evacuated. ion of the numerous ad- ult. Hæmorrhage slight. removed.	Not stated.	Not mentioned.	Died twenty-three hours after the operation, cause not stated.	Schmidt's *Jahrb.*, band 102, No. 6, 1859, p. 304.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N of
113.	1846.	Dr. Heyfelder, Erlangen.	22.	The abdomen was much distended.	Not stated.	Thirteen inches.	To the omentum.	Mel cance ovary in t and
114.	October 18th, 1859.	Mr. Holt, London.	37.	Married; mother of four healthy children. Disease been in existence three years. Tapped for the first time twelve months ago, since which period had been tapped fourteen times. Prolapse of the uterus when the cyst was distended. Menstruation regular up to the 22nd of September, the date of her admission into the hospital.	Chloroform administered	Ten inches.	To the anterior and upper part of the growth.	Poly ov
115.	July 18th, 1855.	Mr. G. Murray Humphry, Cambridge.	27.	Married. Health generally good. Short spare woman, rather delicate. Mother of three children; the youngest nearly two years of age. Disease of fourteen months duration.	Chloroform administered	Four inches.	None.	Mult ovar co abo cho scis
116.	September 27th, 1858.	Mr. Hutchinson, London.	29.	Married; had four children. Tumour first noticed two years previously. In September, 1857, was again delivered. Abdomen scarcely lessened; and was tapped, five gallons of fluid being removed. No œdema of feet, countenance clear, temper cheerful and good.	Chloroform administered	Six inches.	Numerous in all directions.	Mult ov
117.	February, 1859.	Mr. Hutchinson, London	44.	Married; mother of two children. The tumour had existed three years and had been thrice tapped. After the second tapping iodine was injected and suppuration of the cyst followed. She was in wretched health at the time of the operation, being confined to bed and not likely to live many weeks.	Chloroform administered	Eight inches.	Extensive anteriorly.	Mult ovar con seve lon fro
118.	1836.	Dr. Janson, Frankfort.	45.	The disease of two years duration; rapid growth from the size of a child's head until the abdomen was filled; nocturnal fever.	Not stated.	Six inches.	Extensive to parietes.	Ov cy 1836

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
noved.	Not stated.	Not mentioned.	The patient died on the seventh day, the cause of death not stated.	*British and Foreign Medical Review*, 1858.
peduncle at the right wer part of the tumour d and divided. The hen pierced, tied in two d the tumour excised. were brought out at the of the incision. Both ently removed, but was until the tumour was rwards.	Not stated.	By twelve interrupted sutures, plaster, and bandages.	Death from peritonitis on the fourth day.	Guy's Hospital Reports, October, 1843; p. 477.
noved.	Not stated.	Not mentioned.	Death thirty hours after the operation, from peritonitis.	Kiwisch's Table, *in Klin. Vorträge*, &c., Prag. 1856.
noved.	Not stated.	Not mentioned.	Death on the fourth day, from peritonitis.	Kiwisch's Table, *in Klin. Vorträge*, &c., Prag. 1856.
uiting during the operaedicle, scarcely as thick , tied *en masse*, and the ed.	Not stated.	The peritoneum not included in the suture.	Death on the second day, from hæmorrhage. The ligature was proved after death to have escaped from the pedicle.	Scanzoni's *Beiträge*, 1858; Simon's Table.
ion was very much proany bleeding vessels. The pierced, and tied in two the tumour excised.	Not stated.	The peritoneum not included in the suture.	Death on the second day, from peritonitis.	Scanzoni's *Beiträge*, 1858; Simon's Table.
t in the operation. The ick as two fingers, was tied in two portions, and xcised.	Not stated.	The peritoneum was not included in the sutures.	Death on the third day, from peritonitis.	Scanzoni's *Beiträge*, 1858; Simon's Table.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nature of the tumour.
126.	1847.	Drs. Küchenmeister and Steinert, Zittau.	28.	Disease of six years duration; severe cramps of the abdomen, and on that account had a strong desire to have the operation performed; tapped; reaccumulation of the fluid in four weeks.	Not stated.	Six inches.	None.	Very [illegible] ovarian [illegible]
127.	1854.	Mr. S. Lane, London.	28.	Unmarried. Disease had existed two years.	Chloroform administered by Dr. Snow.	Six inches.	None.	[illegible] ovarian [illegible]
128.	April 28th, 1847.	Dr. Langenbeck, Berlin.	59.	No account.	Not stated.	One and a half inches.	None.	[illegible] ovarian with [illegible]
129.	March 20th, 1851.	Dr. Langenbeck, Berlin.	58.	No account.	Not stated.	Six inches.	Slight.	[illegible] ovarian [illegible]
130.	May 20th, 1851.	Dr. Langenbeck, Berlin.	30.	Had no children; disease had existed two and a half years; great distension of abdomen; the condition of the patient good.	Not stated.	Two inches.	None.	[illegible] cyst right [illegible] [illegible] degen
131.	November 27th, 1851.	Dr. Langenbeck, Berlin.	51.	Unmarried. The disease had existed three years; dyspnœa urgent; had œdema of the extremities a year ago, which soon disappeared; varicose veins on the legs.	Not stated.	One and a half inches.	None.	[illegible] ovarian
132.	March 22nd, 1825.	Mr. Lizars, Edinburgh.	25.	Tumour of about twelve months duration; menses regular until the last three months, when they became pale and scanty.	Not stated.	From the sternum to the pubes	To the parietes, colon, and pelvis.	[illegible] tumour weighing
133.	April 5th, 1850.	Dr. Lyon, America.	31.	Unmarried. Tumour of two years duration; tapped three times.	Not stated.	Three inches, afterwards enlarged.	Slight.	Cystic the [illegible] ovary

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
ions separated with the in one place with the ature of the pedicle *en* torsion used to a few he tumour removed.	Not stated.	Not mentioned.	Death three days afterwards, from hæmorrhage.	Scanzoni's *Beiträge*, 1858; Simon's Table.
of some of the cysts were hey ruptured during the me of them were evacu- rocar and canula; the pierced and tied in two d the tumour excised; tle escape of blood; the e cyst together with the ponged away; the liga- pedicle was brought out of the lower stitches of	Within.	By deep sutures.	Rallied only slightly after the operation, and she gradually sank and died forty hours afterwards from the shock, and slight peritonitis; the ligature on *post mortem* examination was found to have come away.	Kindly communicated by the operator.
arly four inches wide, in three portions, and xcised.	Left in the wound secured to a roll of lint.	Sutures passed close to, but not through the peritoneum.	Died from tetanus twelve days after the operation.	Kindly communicated by the operator to the reporter.
ns of fluid escaped on cyst; pedicle was thick r; and contained two ge as the radial; a good d lost in the operation ivided omental vessels; afterwards. The tumour	Secured by a clamp outside the abdominal cavity.	Six deeply placed wire sutures used.	Death five weeks afterwards from pyæmia; hæmorrhagic symptoms were decidedly present; there was no evidence of peritonitis having occurred after the operation.	*Medical Times and Gazette*, November 16th, 1858, and kindly revised by the operator.
ions were broken down y; tumour removed.	Pedicle secured externally by a clamp.	Silver wire sutures used.	Death in collapse six hours after the operation; had never rallied.	Kindly communicated by the operator.
was pierced and tied in ; no accident during the umour removed.	Not stated.	Not mentioned.	Death after five days, from exhaustion caused by severe diarrhœa.	Scanzoni's *Beiträge*, 1858, Simon's Table.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	Nature of the tumour
119.	Not given.	Dr. M. Kempf, America.	Not given.	A trocar was introduced but no fluid escaped; it was again introduced and a limpid stream of fluid let off; the fluid subsequently accumulated and she was again tapped, and tincture of iodine injected; it was then determined to extirpate the tumour. (As the tumour was solid the tincture must have been injected into the peritoneum; it produced no bad effects.)	Not stated.	Not given.	Extensive; and one to a coil of intestine.	Nearly [illegible] weight 3 lbs.
120.	August 1st, 1843.	Mr. C. Aston Key, London.	19.	Unmarried. Catamenia appeared every fortnight; tumour of fifteen months duration; health generally good; within the last three months some emaciation; menstruated two days previously to the operation.	Not stated.	From ensiform cartilage to pubes.	None.	Cyst[illegible] both ov[illegible] weighing 20 lbs.
121.	1844.	Dr. Kiwisch, Würzbürg.	29.	No account.	Not stated.	Four inches.	Very firm.	Ovarian [illegible] 30 lbs.
122.	1847.	Dr. Kiwisch, Würzbürg.	45.	The tumour was very large; the patient suffered much and was exhausted.	Not stated.	Six inches.	To the liver and colon.	Ov[illegible] cyst[illegible] [illegible] weighing [illegible]
123.	1850.	Dr. Knorre, Hamburg.	24.	Unmarried. Had suffered from the disease two years; tapped three months previously; abdomen much distended; undisturbed general health.	Not stated.	One and a half inches.	To the abdominal walls.	Simple [illegible] contents 12 lbs. [illegible]
124.	1850.	Dr. Knorre, Hamburg.	24.	Unmarried; tall and thin; scrofulous habit; well nourished; perfectly undisturbed health.	Not stated.	Four inches.	To the small intestines.	Simple [illegible] contents [illegible]
125.	1850.	Dr. Knorre, Hamburg.	45.	Unmarried; disease had existed four years; tapped; in three months abdomen again enormously distended; no fever; general health so good that the patient was able to bear much exertion.	Not stated.	Nine inches.	None.	Ov[illegible] cyst[illegible] weighing 44 lbs.

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
was ligatured *en masse* ur excised.	Included in the sutures of the wound.	By sutures.	Death on the third day, from peritonitis.	Martin *Ueber die Eierstockwassersucht*; Jena, 1852.
of adhesions, followed by rhage; the adhesion to igatured and divided; ed of its contents; a d round the pedicle and ved.	Not stated.	By interrupted sutures, adhesive straps, &c.	Had pain and vomiting, for which she was bled on the second day. Died on the third day, from peritonitis.	*London Medical Gazette*, vol. xxxv, p. 746.
moved.	Not stated.	Not mentioned.	Cause of death not stated.	Dr. J. T. Bradford's Report, 1859, case 18.
moved; some ascitic fluid icle pierced and tied in	Not stated.	Not stated.	One half of the ligature slipped from the pedicle, and she died from hæmorrhage in six hours.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 225.
of the bowels; cystic lood escaped into the peritoneum; the pedicle ied in two portions, and rcised.	Not stated.	Not mentioned.	Death in thirty-six hours, from peritonitis.	Scanzoni's *Beiträge, &c.*, 1858; Simon's Table.
moved.	Not stated.	Not mentioned.	Death on the fifth day, from peritonitis.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 230.
moved.	Not stated.	Not mentioned.	Cause of death not stated.	Scanzoni's *Beiträge*, 1858; p. 140.
broad, and required six tures. The other ovary nd excised.	Within.	Not mentioned.	Patient died on the thirty-seventh day; cause of death not stated.	*Ohio Medical and Surgical Journal*, No. 2, 1859; Hamilton's Report.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of adminstration and preparations employed	Length of the incision.	Adhesions.	T
142.	February 8th, 1858.	Dr. W. H. Mussey, America.	56.	Married; had six children. Tumour noticed first about a year ago; abdomen much distended; dyspeptic, urine scanty, pains in abdomen and back.	Not mentioned.	Eighteen inches.	Slight.	Mu... 21 ... left ... mo...
143	November 12th, 1858.	Mr. W. C. Orford, Birmingham.	32.	No account.	Chloroform administered	Five inches.	None.	U... ova...
144.	July 27th, 1846.	Mr. W. B. Page, Carlisle.	39.	Married; had nine children. Tumour first felt fifteen months before; health previously good, but became gradually impaired, so much so that she was unable to follow her occupation as a washerwoman; much emaciation; urgent dyspnœa; aggravated dyspepsia, and sleeplessness; urgent for the operation.	Not used.	Three inches.	Extensive to colon and rectum.	...
145.	July 4th, 1859.	Mr. W. B. Page, Carlisle.	42.	Tumour first felt fifteen years since; health good; weight of tumour very distressing.	Chloroform given, but, producing sickness, was abandoned.	Four inches.	None.	...
146.	June, 1859.	Mr. James Part, London.	52.	Had been gradually increasing in size for five years; functions healthy; skin covered with dark patches; circumference at umbilicus sixty inches; from pubis to xyphoid cartilage thirty-six inches.	Chloroform by Dr. Richardson, with Dr. Snow's instrument.	Nine inches.	Three inches in extent on each side of median line, between umbilicus and xyphoid cartilage.	Mo...
147	September 9th, 1840.	Mr Benjamin Philips, London.	21.	Tumour first noticed about nine months ago, which steadily increased accompanied with severe pain; variety of treatment employed with little benefit, and she became clamorous for the operation to be performed; had no peritonitis; health beginning to suffer; spirits good; body well nourished.	Not stated.	An inch and a half, afterwards slightly enlarged.	None.	U...

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
r was drawn out and the lied to the pedicle *en* e tumour removed.	Not stated.	Not mentioned.	The ligature of the pedicle had slipped, and death ensued from hæmorrhage shortly after the operation.	Scanzoni's *Beiträge*, 1858; Simon's Table.
orthy of notice. The ved.	Within.	By interrupted sutures, but not through the peritoneum.	Death from peritonitis on the fourth day. Treatment: leeches, calomel, and opium.	The particulars kindly communicated by the operator.
removed.	Not stated.	Not mentioned.	Death thirty-six hours after the operation; cause not stated.	*Monatsschrift für Geburtskunde*, May & June, 1856; Focks' Table.
removed.	Not stated.	Not mentioned.	Death on the eleventh day, from peritonitis.	*Monatsschrift für Geburtskunde*, May & June, 1856; Focks' Table.
an tumour removed.	Not stated.	The peritoneum not included in the sutures.	Severe peritonitis. Death forty-eight hours after the operation.	Busch's *Chirurg. Beobach*, Berlin, 1854; p. 168.
noved. Pedicle short and ity arteries tied; all the re threaded in a broad nserted from within outregion of the iliac fossa, there. On the second day hæmorrhage. The wound nd the coagula removed.	Not stated.	Not mentioned.	Death forty-four hours after the operation, from secondary hæmorrhage.	Busch's *Chirurg. Beobach*, Berlin, 1854; p. 168.
e was placed around the the tumour excised. s were tied separately our was removed.	Not stated.	By sutures, adhesive straps, and a bandage.	Death after fifty-six hours, from peritonitis.	Lizars on the *Extraction of Diseased Ovaria*, p. 16.
ated; adhesions separafingers; the sac drawn ture placed around the he tumour removed.	Not stated.	Not mentioned.	Died next day; cause of death not stated.	Dr. Lyman's Report, Prize Essay; Boston, 1856, case 202.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
134.	October, 10th, 1849.	Dr. Edward Martin, Jena.	22.	In 1846 a small tumour perceived in the inguinal region; married notwithstanding; tapped three times; after the two last tappings a pseudo membrane and a hair escaped, which showed the nature of the tumour; abdomen much distended; recumbent posture, sitting and respiration difficult; was however well nouriahed.	Not stated.	Eight inches.	None.
135.	1818.	Dr. Ephraim McDowell, America.	Not given.	Had been under treatment for eighteen months; tapped four times; on one of these occasions the puncture was enlarged sufficiently to introduce a finger for the purpose of diagnosis.	Not stated.	Not given.	To the parietes, intestines, and uterus.
136.	Not given.	Dr. McMillen, America.	Not given.	No account.	Not stated.	Not given.	Not stated.
137.	Not given.	Dr. Meeker, Indiana, America.	32.	Married. Tumour of two years duration; had also right inguinal hernia; tapped repeatedly.	Not stated.	Twenty-one inches.	Extensive.
138.	1847.	Dr. Mogk, Offenbach.	58.	The duration of the disease unknown; great distension of the abdomen; cough; sleeplessness; emaciation; no fever; the general condition of the patient still good.	Not stated.	Long.	Slight.
139.	Not given.	Dr. Mott, New York, America.	40.	Unmarried. The case appeared a good one for operation, in every respect.	Not stated.	Not given.	None.
140.	Not given.	Dr. Müller, Hamburgh.	Not given.	No account.	Not stated.	Not given.	Not mentioned.
141.	December 1st, 1857.	Dr. F. B. Mussey, America.	39.	Married, and in excellent condition.	Not stated.	Nine inches.	None.

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum	Symptoms of reaction; time and cause of death.	Source of information.
sed; pedicle of the right ed and tied in two por- noved; the left ovary ved; two ligatures were e arteries in the abdo- was placed in the lower ound, through which the also brought out.	Within.	By interrupted sutures.	On the sixth day there was suppuration and fœtid odour from the wound, for which Peaslee's artificial serum was injected. Ligatures came away on the nineteenth and twenty-fourth days The patient died on the forty-fifth day.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
nhalation of the chloro- thing became oppressed, almost imperceptible; ration had to be sus- he operation completed d.	Within.	By sutures carried through the peritoneum.	Had hæmoptysis a few hours before death, which occurred on the third day. The lungs were found in a condition amounting to pulmonary apoplexy. There was no inflammation of the peritoneum.	The particulars kindly communicated to the reporter.
abdominal walls; punc- emptying of contents; ed close to the base of h was then excised.	Within.	By four sutures, but not through peritoneum.	Vomiting urgent after operation; when retching violently said, "Something gave way;" after which speedy sinking, coma, and death in thirty-six hours. After death the abdomen was found filled with blood.	*Lancet*, December 12th, 1846; and kindly revised by the operator.
pened; cyst tapped and l secured. No unto- tance occurred at the	Secured without by means of clamp.	By four sutures through peritoneum.	On the second day symptoms of acute peritonitis came on, and she died on the fourth day.	*Lancet*, October, 1st, 1859; and kindly revised by the operator.
), chloroform exhibited; ion; 10.12, cyst emptied; ied; 10.25, severed; 10.37, by sutures; 10.45, patient er adhesions were severed rable difficulty by the into by the first incision ely emptied. Secondary half an hour after the m the clamp (Hutchin- very slightly given way.	Without.	Interrupted sutures were carried through the peritoneum.	After the hæmorrhage, pain in the left iliac fossa relieved by suppositories of morphia; not much reaction; shock to the nervous system from the operation and subsequent hæmorrhage, which, although not much, frightened her. She died forty-three hours after the operation.	Kindly communicated by the operator.
seized with the vulcel- ed, and drawn out. A d tightly round the pedi- ched. No hæmorrhage eration.	Within.	By hare-lip needles.	Slight hæmorrhage from the wound, but no evidence of escape of blood into the abdominal cavity; she never rallied, and died from peritonitis on the fourth day, and from "erosion" of the bowels.	*London Medical Gazette*, October 9th, 1840.

No. of case.	Date of the operation	Name of the operator.	Age of the patient	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	N a tu
148.	Not given.	Dr. C. A. Pope, America.	Not given.	Duration, &c., not mentioned.	Not stated.	Not given.	Not stated.	O cy
149.	Not given.	Dr. C. A. Pope, America.	Not given.	Duration &c., not mentioned.	Not stated.	Not given.	Not stated.	O cy
150.	March 21st, 1848.	Mr. H. G. Potter, Newcastle.	36.	Married; had one child. Abdomen much distended; disease of six years duration; tapped once; general health good; catamenia regular until within two months; anxious to have the operation performed.	Chloroform administered	From ensiform cartilage to the pubis.	Of left tumour to the parietes and omentum, the right adherent to the uterus.	Un of ov mu of th
151.	1852.	Dr. Rawitz.	49.	No account.	Not stated.	Not given.	Not stated.	O cy
152.	1834.	Dr. Roser, Marburg.	41.	Married; had several children. The disease stated to be of two years duration; tumour increased rapidly; considerable distension of abdomen; general health good; prognosis favourable.	Not stated.	Three inches.	A few filaments only.	O ov
153.	June 14th, 1852.	Dr. Scanzoni, Würzburg.	33.	Unmarried. Menstruation began at sixteen years of age, and appeared regularly until 1851, when it ceased; nausea in the morning, generally followed by sickness, which continued nearly seven months. In July, 1851, tumour about the size of an apple first noticed; much exhausted from the sickness, for which medical aid was of no avail; abdomen much distended: ascites present; tumour moveable; not much emaciation; countenance pale. The operation was reluctantly undertaken.	Chloroform administered	Seven inches.	Slight.	Left ov wei lig rig cul ome fol

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of Information.
ur used to divide the	Not stated.	Not mentioned.	Cause of death not stated.	*American Journal of Medical Sciences*, April, 1859.
ioved.	Not mentioned.	Not mentioned.	Cause of death not stated.	*American Journal of Medical Sciences*, April, 1859.
left ovarian cyst was tied in two portions; ed; and tumour removed. as passed round the tu- ight side as tight as pos- wo-thirds of the mass ture slipped and arterial esulted, which was soon t more than 4 oz. of	Within.	By sutures, plaster, and bandage.	Injections given on he 23rd, which came away unmixed with feculent matter; she died on the 6th from peritonitis, and ulceration of the ileum.	*London Medical Gazette*, June 23rd, 1848.
ioved.	Not stated.	Not mentioned.	Cause of death not stated.	Kiwisch's *Klin. Vorträge*; Prague, 1856.
pierced and tied in two accident in the opera-	Not stated.	Not mentioned.	Death from suppurative peritonitis in the pelvic region.	Scanzoni's *Beiträge*, 1858; Simon's Table.
unctured, and a small colloid matter dis- dicle secured by liga- tumour excised. Some rom two vessels, which sted by ligatures.	Not stated.	By six sutures, but not carried through the peritoneum; cerate and a compress dipped in iced water were applied afterwards.	The patient became suddenly worse on the 16th, and gradually sank; a *post mortem* examination showed death to have arisen from peritonitis.	Scanzoni's *Beiträge, zur Geburtskunde*, vol. i, 1856.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Adhesions.	
154.	1838.	Dr. Schott, Frankfurt.	31.	Tumour of five years duration; abdomen much distended; ascites present; general health good.	Not stated.	From the navel to the symphysis in the linea alba.	Very inconsiderable with the omentum.	Mu o we
155.	1856.	Dr. Schuh, Vienna.	24.	Disease of three years duration; tapped twice; the patient of feeble constitution, but healthy.	Not stated.	Long.	Very strong.	Th cys le
156.	Not given.	Mr. A. G. Smith, America.	Not given.	No account.	Not stated.	Not given.	Not stated.	Ova
157.	1846.	Dr. Protheroe Smith, London.	39.	Tumour of several years duration; much emaciated, and circulation very feeble.	Not used.	Four inches at first, afterwards considerably enlarged.	Extensive.	Mu ova dep of qu fi sol wa
158.	1854.	Dr. Protheroe Smith, London.	28.	Tumour of five or six years duration; much emaciated; derangement of digestion, and general distress.	Chloroform by the operator's inhaler.	Large.	Slight and recent.	Mu o wa lig pa wal tun a (ac fas on t s
159.	May 21st, 1847.	Mr. G. Southam, Salford.	26.	Married; had five children. Tumour only noticed ten months; tapped; tumour increased rapidly; some emaciation; otherwise, her general health good; menses occurred every three weeks, attended with pain; death imminent.	Not stated.	Three inches, afterwards extended.	Firm to omentum and intestines.	Fib cor ova

of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
long but very vascular. ied *en masse*.	Not stated.	Not mentioned.	Death twenty-eight hours after the operation, from peritonitis.	Scanzoni's *Beiträge*, 1858; Simon's Table.
ured *en masse*; no acci- peration; hæmorrhage	Not stated.	Not mentioned.	Death from peritonitis on the third day.	Scanzoni's *Beiträge*, 1858; Simon's Table.
plied to the pedicle and moved.	Not stated.	Not mentioned.	Ligature became loose, and death took place from hæmorrhage some days after the operation.	Dr. Lyman's Report, Boston, 1856, case 261.
punctured and its con- ed. The old adhesions t viscera separated and cised.	Within.	By interrupted sutures through the peritoneum, and water dressing.	Death after four hours in consequence of the operative procedure.	The particulars kindly communicated by the operator.
incision the cyst was ured, and withdrawn minal cavity.	Without.	Interrupted sutures not through the peritoneum, and water dressing.	Death after five days from peritonitis, which commenced the day after the operation.	Unpublished, the particulars kindly communicated by the operator.
to tap the tumour was the incision was ex- dhesions detected. The moved after the pedicle red by a single ligature. intestines easily separa- ger.	Not stated.	By interrupted sutures, and transparent adhesive plaster.	Died from peritonitis on the 26th; lungs much congested, and in some places exhibited marks of recent inflammatory action.	*Transactions of the Provincial Medical and Surgical Association*, vol iii; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
160.	September, 1857.	Mr. G. Southam, Salford,	40.	Tumour of several years duration; tapped every six weeks for some time before the operation; confined to bed for two months; health rapidly giving way.	Chloroform anministered	Seven inches.	Extensive to parietes and intestines.
161.	April 30th, 1841.	Dr. Stilling, Cassel.	22.	Unmarried. Disease had existed three years and a half; complete distension of the abdomen; health generally good; suffered so much inconvenience from the tumour that she determined to undergo any operation necessary for its removal.	Not stated.	Six inches.	None.
162.	November 14th, 1850.	Mr. F. G. Stockwell, Bath.	20.	Unmarried. Tumour first perceived in 1848; general health good; tumour moveable; fluctuation.	Chloroform administered	From umbilicus to near the pubis.	None.
163.	1852.	Dr. Strempfel, Rostock.	40.	Married. The disease of more than two years duration; badly nourished; abdomen much distended; feet œdematous; tapped once.	Not stated.	Four inches.	In two places, which were very vascular.
164.	March 15th, 1853.	Dr. Tanner, London.	46.	Married twenty-four years. Never pregnant. Tapped once; began to enlarge seven months ago; weak and emaciated; abdomen as large as at full term of pregnancy; menses always irregular.	Chloroform by an inhaler.	Three inches.	Some slight adhesions rapidly broken down.
165.	December 19th, 1857.	Dr. Tanner, London.	41.	Married. Never pregnant. Catamenia always irregular; suffered from the tumour nearly four years, which had increased rapidly of late; causes great inconvenience from its bulk; tapped once.	Chloroform by an inhaler.	Small.	None.

s of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum	Symptoms of reaction; time and cause of death.	Source of information.
incision the cyst tapped ur quarts of fluid evacu- ur removed.	Within.	Peritoneum included in the sutures.	Died in five days, cause of death not stated.	Unpublished. The particulars kindly communicated by the operator.
vas incised and the fluid l cysts evacuated. The lrawn forwards by hooks; ouble silk ligature was l the pedicle by means of l the ends firmly tied on and the tumour excised. in the operation.	Not stated.	Four sutures were applied, and a bandage used.	Death from hæmorrhage, on the fourth day; the blood was found to have escaped from the pedicle.	*British and Foreign Med. Review*, vol. xiii, p. 547.
ted; tumour withdrawn; sfixed by a double liga- ed, and the tumour re- ends of the ligature were ss a bone spatula, bring- urface of the pedicle close inal parietes and retaining ition.	Within, but close to the abdominal parietes.	Closed by two sutures and alternate adhesive straps, but not including the peritoneum.	Died on the third day, from peritonitis; the inflammation was confined to a small sac composed of the uterus, peritoneum lining the abdominal parietes, and one side of the pedicle: it would have contained about half an ounce of fluid.	The particulars kindly communicated by the operator.
ons were separated with me hæmorrhage followed. was transfixed and tied in .	Not stated.	Not mentioned.	Died eighteen hours after the operation, from hæmorrhage and peritonitis.	Scanzoni's *Beiträge*, 1858; Appendix to Simon's Table, p. 141.
orrhage on removing the ature placed round the as rather low after the d did not rally for some	Within.	Silk sutures not through the peritoneum.	Troublesome sickness set in on the fourth day. Died from exhaustion 21st of March.	*Medical Times and Gazette*, April 16th, 1853; and kindly revised by the operator.
ature was placed on the ch gave way before the ld be completed.	Not stated.	Not mentioned.	Died immediately after the operation, from hæmorrhage. Ligature on the pedicle gave way.	*Lancet*, January 9th, 1858; and kindly revised by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
166.	April 3rd, 1854.	Mr. Thomas P. Teale, Leeds.	21.	Unmarried. Tumour of eighteen months duration; menses absent during that period; tapped five times; much emaciated; abdomen greatly distended; patient wished for the performance of the operation.	Not stated.	Four inches, afterwards slightly enlarged.	Slight where the tappings had been made.
167.	April 8th, 1859.	Mr. Terry, Bradford, Yorkshire.	29.	Married five years. Twelve months after marriage had a difficult labour; three days afterwards had shivering, vomiting, and pain all over the abdomen. Ascites present; urine albuminous; œdema of the legs; catamenia absent three years; pale and emaciated; spirits depressed; tapped twice; urgent for the performance of the operation.	Æther and chloroform first used, but chloroform given subsequently.	Not given.	Slight.
168.	November 9th, 1847.	Dr. Robert Thompson, America.	Not given.	Married.	Not stated.	Not given.	Not stated.
169.	Not given.	Unknown, Hamburgh.	Not given.	No account.	Not stated.	Not given.	Not mentioned.
170.	November 12th, 1851.	Dr. Van Buren, America.	45.	Married; had four children. Tumour of seven years duration. Had a continuous sanguineous discharge from the uterus; menses regular previously; had protrusion of the vagina and posterior wall of the bladder, caused by the pressure of a bandage which had been applied.	Not stated.	Nine inches.	To mesentery.
171.	Not given.	Mr. D. Henry Walne, London.	Not given.	No account.	Not stated.	Long.	Extensive and strong.
172.	October 19th, 1843.	Mr. D. Henry Walne, London.	45.	Unmarried. Tapped several times; œdema of the lower extremities; bowels sluggish. Courageously demanded the operation. At this time her general health was good, but was very feeble and emaciated.	Not stated.	Fifteen inches.	None.

s of and accidents during he operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
unctured and contents pedicle transfixed by a re, and tied in two por- e tumour excised. The he pedicle brought to the ttached, with the stump , to the twisted sutures.	Retained external to the abdominal cavity by two pins attached to the twisted sutures.	The upper part of the wound was united by common uninterrupted sutures, and its lower part by two twisted sutures.	Died in twenty-two hours, from hæmorrhage apparently from some vessels of the omentum which did not show any signs of bleeding at the time of the operation. The pedicle after death was found secure, and evidently not the source of the hæmorrhage.	*Medical Times and Gazette*, July 1st, 1854.
asily separated; several ; ascitic fluid evacuated; ged through the wound,	Retained external to the abdominal cavity by means of a clamp.	Wound closed by silver wire sutures.	Death twenty-two hours after the operation, probably from peritonitis.	*Medical Times and Gazette*, June 11th, 1859.
noved.	Not stated.	Not mentioned.	Patient died on the twelfth day, cause of death not stated.	Hamilton's Report, *op. cit.*
r was removed.	Not stated.	Not mentioned.	The cause of death not stated.	Scanzoni's *Beitrage*, 1858; p. 140.
ons required six ligatures ut close; the pedicle con- y dilated veins, one of ay under the ligature and s of blood were lost; it secured and the tumour	Not stated.	Not mentioned.	Died in thirty-nine hours, from peritonitis.	Dr. Lyman's Report, Prize Essay, Boston, 1856; case 282.
that the adhesions were up; tumour removed.	Not stated.	Not mentioned.	Death speedily followed, cause not stated.	No. 108, R. Lee's Table.
was pierced by two liga- tumour excised between and the tumour; an in- us tumour was found e pelvis, which was left in nal cavity, and wound	Within.	Wound united by eighteen sutures, adhesive straps, and a bandage.	Sutures removed ninety-three hours after the operation. She died on the tenth day, from peritonitis.	*London Medical Gazette*, March 1st, 1844.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.
173.	November, 1830.	Dr. J. C. Warren, America.	43.	Unmarried. Tumour of four years duration; hard, moveable, and not painful; increased rapidly in size shortly before the operation. Catamenia profuse; had considerable cough; appetite failed her.	Not stated.	Twelve inches.	Broad, to the lower part of the abdominal cavity.
174.	Not given.	Dr. Wattmann, Wien.	Not given.	No account.	Not stated.	Not given.	Not mentioned.
175.	January 21st, 1859.	Mr. T. Spencer Wells, London.	39.	Single woman. Tumour first noticed two years ago. Catamenia regular until the end of 1857 when they ceased, and have not since returned; emaciated; flatulence and dyspnœa.	Chloroform first used, sulphuric æther given afterwards.	From the ensiform cartilage to two inches above the pubes.	Very slight omental.
176	June 17th, 1859.	Mr. T. Spencer Wells, London.	29.	Married seven years; had no children. Tumour first noticed in May, 1857. Considerable doubts as to the nature of the disease; pregnancy at one time suspected; uterine sound would not pass into the uterus; Simpson's hysterometer used, the sound then passed six inches. Pleuritic effusion, for which she was treated. Ascitic fluid removed twice.	Chloroform administered	Small, afterwards enlarged to the ensiform cartilage.	Extensive to three portions of intestine, and to the omentum.
177.	October 11th, 1859.	Mr. T. Spencer Wells, London.	37.	Unmarried. Twenty years gradual growth; health much broken down by long suffering, and dysmenorrhœa.	Chloroform administered by handkerchief.	Nine inches.	To pelvic walls and cœcum, and broad attachment to uterus.

f and accidents during operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum.	Symptoms of reaction; time and cause of death.	Source of information.
encircled by a thick the ligature a needle thread was carried esion and tied on each hen excised and the moved; owing to the e pedicle the ligature d off, and though the as speedily as possible, merous and large that in a short time from	Within.	Not mentioned.	Death caused by hæmorrhage from slipping of the ligature.	Warren on *Tumours*, 1837, p. 590.
as removed.	Not stated.	Not mentioned.	Cause of death not stated.	Scanzoni's *Beiträge*, 1858, p. 127.
pped during the operation necessary to apply a	Not stated.	Hare-lip pins were used, but were not carried through the peritoneum.	Died from collapse thirty-two hours after the operation, probably from peritonitis.	*Medical Times and Gazette*, February 9th, 1859; and kindly revised by the operator.
hort; tumour applied rus; two clamps used, not sufficient to arrest e; a good deal of ascitic room-shaped piece of enable the clamp to e perfectly.	Was secured by a clamp outside the wound.	Hare-lip pins were used, and were carried through the peritoneum. Superficial intermediate wire sutures used also.	Extensive peritonitis on the second day, and very large serous pleural effusion.	*Medical Times and Gazette*, July 9th, 1859; and kindly revised by the operator.
ial, only difficulty from hment to uterus.	Kept out and secured by a clamp.	Sutures carried through peritoneum.	Went on well for three days, died on the fourth from constant vomiting and exhaustion. After death evidence was found of old peritonitis on the under surface of the liver. No extensive recent peritonitis.	Report of Pathological Society, and *Medical Times and Gazette*; the particulars kindly communicated by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Adhesions.	
178.	October 28th, 1859.	Mr. T. Spencer Wells, London.	38.	Married. Duration two years; rapid increase; tapped twice; very fair general health, but much oppressed by abdominal distension.	Chloroform administered on towel.	Four inches.	Extensive parietal, firm to omentum.	Mul...
179.	Not given.	Mr. T. Spencer Wells, London.	27.	Unmarried. Duration four years; tapped nine times; extreme distension of abdomen.	Chloroform administered on towel.	Ten inches.	Very firm and extensive parietal and omental adhesions.	Tw...
180.	February 6th, 1860.	Mr. T. Spencer Wells, London.	26.	Duration about three years; twice tapped; had suffered from local peritonitis and a mercurial course; a good deal debilitated by pain and pressure.	Chloroform on towel.	Four inches.	Parietal and pelvic to hollow of sacrum by side of rectum.	Mul...
181.	February 27th, 1860.	Mr. T. Spencer Wells, London.	33.	Married; had four children. Tumour first noticed soon after the birth of her last child, which was three years before the operation; tapped five times, emaciated; pale; frequent nausea, and occasional vomiting; respiration impeded; catamenia regular; anxious for the operation.	Chloroform administered	Seven inches.	Very firm and extensive parietal and omental.	Mul...
182.	Not given.	Mr. West, Tunbridge.	24.	Tapped repeatedly.	Not stated.	Not given.	Not stated.	Ov...
183.	1852.	Dr. Wild, Cassel.	28.	Unmarried. The tumour had been perceived two and a half years. The abdomen much distended. Had dyspnœa, derangements of digestion and nutrition. Physical condition good.	Not stated.	Five inches.	None.	S... ov...

of and accidents during the operation.	Pedicle left within or without the abdominal cavity.	Mode of uniting wound. If sutures carried through peritoneum	Symptoms of reaction; time and cause of death.	Source of information.
nour removed through by breaking down small principal cyst.	Kept out and secured by a clamp.	Sutures passed through peritoneum.	Went on quite well for seven days, then acute tetanus came on and she died two days afterwards. After death no cause discovered of tetanus. Condition of abdomen quite satisfactory.	Particulars kindly communicated by the operator. Paper read before the Med.-Chir. Society, on "Woorara in Tetanus."
ion necessary from great solid portion of tumour.	Kept out and secured by a clamp.	Sutures passed through peritoneum.	Died twenty-three hours after operation, from exhaustion.	*Medical Times and Gazette*; the particulars kindly communicated by the operator.
divided and chief vessel The lower part secured by l tumour removed.	Left within abdomen, as the peduncle was too short to be fastened outside the wound.	Hare-lip pin through peritoneum.	Did well for twenty hours, then began to sink, and died thirty hours after operation. *Post mortem* examination not permitted. The death occurred apparently from simple exhaustion.	Not yet published; the particulars kindly communicated by the operator.
cult to make out the line between the cyst and me of the adhesions were the knife. Pedicle tempo- by a clamp. A portion um was tied and excised t the upper angle of the pedicle was transfixed by a whipcord ligature our was excised posterior which was then removed.	A hare-lip pin, by transfixing both edges of the wound and the pedicle effectually prevented the recession of the latter into the abdominal cavity.	Wound closed by hare-lip pins passing through peritoneum, and superficial wire sutures.	On the 28th a portion of of dead omentum was removed; a fresh portion had also protruded, which was tied; a portion of the stump of the pedicle was also removed. Sickness distressing, and she died forty-six hours after the operation from intestinal obstruction of the jejunum, a space being made by the uterus, pedicle, and abdominal parietes through which the whole of the ileum had passed, and the constriction became decided at the lower part of the jejunum.	*Medical Times and Gazette*, March 10th, 1860.
moved.	Not stated.	Not mentioned.	Cause of death not stated.	*Lancet*, October, 1839.
ent in the operation. *masse*. The pedicle e lower angle of the	Not stated.	Not mentioned.	Peritonitis and violent double pleuritis soon set in. Death on the seventh day. A large quantity of pus found in the abdomen.	Scanzoni's *Beiträge, &c.*, 1858; Simon's Table.

ANALYSIS.

The following analysis refers only to the cases of completed ovariotomy included in the preceding tables.

In many of these cases it is not stated whether anæsthetics were used or not. It is, however, exceedingly probable that anæsthesia was induced in all, or almost all, the cases operated on since 1847 (the date of discovery of anæsthetics); and I think I shall not be far wrong in assuming that anæsthesia has been induced in every case operated on since that date.

Owing to the imperfect character of the details of some of the cases, to the absence of facts which should have been mentioned, or to the indefinite phraseology used by some of the operators, I have been under the necessity in many cases of determining, as accurately as I could, the length of the incision, the character, situation, and extent of the adhesions, the time occupied in recovery, and various other particulars, from a careful consideration of all the facts and circumstances of the case as reported by the operators.

It was found impossible always to render the length of the incision in inches, consequently I have denominated it *short* when it was under four inches; *medium*, when it

was from four to eight inches; and *long* when it exceeded that length.

The tumours are arranged according to the weight in three classes, namely—*small*, when weighing less than five pounds; *medium*, if from five to fifteen pounds; and *large*, when the weight exceeded fifteen pounds.

In the table of the duration of life of the successful cases, those only are tabulated which had been operated upon more than twelve months. The duration only refers to the period which intervened between the performance of the operation and the time when the particulars of the case were published or furnished to the reporter by the respective operators.

The facts connected with the social condition of the patients, and the particulars respecting menstruation, are not included in the Analysis. With respect to the former, a sufficient amount of information has not yet been obtained to enable us to draw any probable inference as to its effects; and with respect to the latter, the details given are generally so vague as to be of no statistical value if tabulated.

AGES OF PATIENTS.

Years.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Successful cases.	2	2	3	5	7	2	4	5	10	6	5	7	5	4	5	7	9	2	3	3	4
Unsuccessful cases.	..	2	2	5	3	5	4	6	1	3	4	7	6	10	4	5	2	..	6	1	5
Total . .	2	4	5	10	10	7	8	11	11	9	9	14	11	14	9	12	11	2	9	4	9

AGES OF PATIENTS.—CONTINUED.

Years.	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	55 to 60	Above 60	Total.
Successful cases.	7	4	3	2	3	1	..	6	3	4	1	2	1	3	2	..	..	..	7	3	152
Unsuccessful cases.	4	4	5	2	2	1	1	8	2	2	..	2	3	2	3	..	..	..	6	1	129
Total . .	11	8	8	4	5	2	1	14	5	6	1	4	4	5	5	..	..	..	13	4	281

NATION IN WHICH OPERATIONS PERFORMED.

Class of cases.	Great Britain.	Germany.	America.	Unknown.	Total.
Successful .	127	13	64	8	212
Unsuccessful	95	38	49	1	183
Total . .	222	51	113	9	395

CONDITION OF THE PATIENT AT THE TIME OF THE OPERATION.

Class of cases.	Health good.	Health impaired.	Much emaciated.	Complicated.	
				With other diseases	With pregnancy.
Successful .	21	17	47	21	2
Unsuccessful	21	25	46	27	2
Total . .	42	42	93	48	4

DURATION OF THE DISEASE.

Class of cases.	BETWEEN.										Above 10 years.	Total.
	6 and 12 months.	1 and 2 years.	2 and 3 years.	3 and 4 years.	4 and 5 years.	5 and 6 years.	6 and 7 years.	7 and 8 years.	8 and 9 years.	9 and 10 years.		
Successful .	21	31	12	10	6	8	4	3	0	1	10	106
Unsuccessful	11	29	16	9	5	7	1	1	1	2	5	87
Total . .	32	60	28	19	11	15	5	4	1	3	15	193

NUMBER OF TAPPINGS.

Class of cases.	TAPPINGS.											Total.
	1	2	3	4	5	6	7	8	9	10	Repeated.	
Successful .	29	13	7	3	2	1	4	2	0	0	8	69
Unsuccessful	23	9	2	5	1	1	1	2	1	2	9	56
Total . .	52	22	9	8	3	2	5	4	1	2	17	125

INCISION.

Class of cases.	Length.			United by		Sutures carried through peritoneum.
	Short.	Medium.	Long.	Interrupted sutures.	Pins or wires.	
Successful . .	36	38	102	126	18	9
Unsuccessful .	37	35	45	105	12	11
Total . . .	73	73	147	231	30	20

ANÆSTHETICS ADMINISTERED.

Class of Cases.	Not administered.	Administered.	Total.
Successful . .	45	134	179
Unsuccessful .	37	108	145
Total . . .	82	242	324

ADHESIONS.

Class of cases.	Slight.	Extensive.	None.	Requiring ligature.
Successful . .	66	67	68	13
Unsuccessful .	45	66	31	29
Total . . .	111	133	99	42

NATURE AND WEIGHT OF THE TUMOURS, &c.

Class of cases.	Mono-cystic.	Polycystic.	Solid.	Small.	Medium.	Large.	Both ovaries diseased.
Successful . .	19	66	8	4	14	30	8
Unsuccessful .	25	106	13	3	17	48	6
Total . . .	44	172	21	7	31	78	14

PEDICLE.

Class of cases.	Stated left within the abdomen.	Inferred left within the abdomen.	Kept without by various methods.	Tied in two or more portions.	Singly ligatured.	Stitched in the wound.	Ecraseur used to divide it.
Successful . .	113	76	29	122	22	3	2
Unsuccessful.	58	97	25	57	26	3	1
Total . . .	171	173	45	179	48	6	3

SUCCESSFUL CASES.—TIME OF RECOVERY.

In fourteen days.	In three weeks.	In four weeks.	In five weeks.	In six weeks.	In seven weeks.	In eight weeks.	In nine weeks.
5	35	21	15	12	4	10	1

SUCCESSFUL CASES.—DURATION OF LIFE AFTER THE OPERATION, &c.

Pregnant since.	Died within one year.	LIVING; AFTER.										
		One year.	Two years.	Three years.	Four years.	Five years.	Six years.	Seven years.	Eight years.	Nine years.	Ten years.	Beyond ten years.
23	6	10	16	7	5	5	5	4	4	4	9	8

UNSUCCESSFUL CASES.—CAUSE AND TIME OF DEATH.

Time of Death.		DEATH CAUSED BY.											Total.
		Shock or collapse.	Hæmorrhage.	Peritonitis.	Phlebitis.	Tetanus.	Intestinal affections.	Abscess.	Chest diseases.	Congestion of brain.	Diabetes.	*Not stated.	
Within two hours		—	3	—	—	—	—	—	—	—	—	—	3
Between	2 and 12 hours	2	2	—	—	—	—	—	—	—	—	3	7
Between	12 and 24 hours	6	6	4	—	—	—	—	—	—	—	3	19
Between	24 and 36 hours	4	3	8	—	—	—	—	—	—	—	2	17
Between	36 and 48 hours	2	4	9	—	—	2	—	—	—	—	1	18
On the	Third day	2	3	12	—	—	—	—	1	—	—	4	22
On the	Fourth day	2	1	6	—	—	—	—	1	—	—	—	10
On the	Fifth day	2	1	5	—	—	1	—	—	—	—	2	11
On the	Sixth day	2	1	7	—	—	—	—	1	—	—	—	11
On the	Seventh day	1	—	2	—	1	1	—	—	1	—	2	8
On the	Eighth day	—	—	—	—	—	1	—	—	—	—	—	1
On the	Ninth day	1	—	2	—	—	1	—	—	—	—	—	4
On the	Tenth day	1	—	2	—	—	—	—	—	—	—	—	3
On the	Eleventh day	—	—	1	—	—	—	—	—	—	—	—	1
Between	11 and 13 days	—	—	2	—	1	—	—	—	—	—	1	4
Between	13 and 15 days	—	—	—	—	—	—	—	1	—	—	—	1
Between	15 and 18 days	—	—	1	—	—	—	—	—	—	1	—	2
Between	3 and 4 weeks	—	—	3	—	—	—	—	—	—	—	—	3
Between	4 and 5 weeks	—	—	—	—	—	—	1	—	—	—	—	1
Between	5 and 6 weeks	—	—	—	—	—	—	—	—	—	—	1	1
Between	6 and 7 weeks	—	—	—	—	—	—	2	—	—	—	—	2
Between	7 and 10 weeks	—	—	—	1	—	—	—	—	—	—	—	1
Total		25	24	64	1	2	6	3	4	1	1	19	

TABLE III.—CASES IN WHICH OVARIAN

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Nature of tumour
1.	February 16th, 1850.	Dr. W. L. Atlee, Philadelphia.	48.	Married. Greatly prostrated. Obstinate sickness and constipation. Death imminent.	Anæsthesia induced.	From one inch above the umbilicus to pubis.	Ovarian cyst weighing
2.	June 15th, 1850.	Dr. W. L. Atlee, Philadelphia.	37.	Married. No account of duration, &c.	Anæsthesia induced.	From near umbilicus to the pubis.	Ovarian cyst weighing
3.	July 25th, 1850.	Dr. W. L. Atlee, Philadelphia.	42.	Married. Prostrated and anæmic from flooding and abortion two or three months previously. Quotidian fever; much suffering, for which morphia given in large doses. Pulse 130, and exceedingly feeble. Operation undertaken only with the hope of arresting the progress of approaching death.	Anæsthesia induced.	From near umbilicus to the pubis.	Ovarian cyst weighing
4.	Not given.	Dr. F. Bird, London.	Not given.	No account of duration, &c.	Not stated.	Not given.	Large ovarian
5.	March 10th, 1852.	Mr. I. Baker Brown, London.	47.	Had one child fourteen years ago; prolapsus uteri came on, and the abdomen began to enlarge soon afterwards.	Chloroform administered.	Four inches.	Unilocular ovarian
6.	1844.	Dr. Bühring Berlin.	22.	Had several children. The disease of several years duration. Enormous distension of the abdomen; difficulty of micturition; frequent sickness; dyspnœa; and œdematous swelling of the chest.	Not stated.	Five inches.	Ovarian

OURS WERE ONLY PARTIALLY EXCISED.

and accidents during the operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
adherent to the intes-ua. Adhering portions ere detached from the wed to remain. Sper-ut and tied.	Not stated.		Died from exhaustion on the third day.		*American Journal of Medical Sciences*, April, 1855.
dhesions, a portion of rge as the palm of the not be removed, and . The pedicle was first vessels picked out and	Not stated.	Recovered.		Still living, April, 1855; has been pregnant, but aborted.	*American Journal of Medical Sciences.* April, 1855.
dhesions, a portion of i not be removed, and ied to the colon. Several tured in their removal, itents, some of which , escaped among the fo ligature applied to ler pedicle: torsion em-	Not stated.	Recovered.		Enjoys perfect health, April, 1855.	*American Journal of Medical Sciences*, April, 1855.
erent to pelvis and ute-it necessary to leave a cyst attached.	Not mentioned.	Recovered.		Not stated.	*Lancet*, 1850, vol, ii, p. 592.
ictured, and seized with forceps, and a portion, four, removed.	Five deep and three superficial sutures, but not through the peritoneum.	Peritonitis supervened, but was subdued. Recovered.		In April, 1854, had gained flesh, and performed her duties well.	Brown on *Surgical Diseases of Women*; and kindly revised by the operator.
could not be removed of the adhesions. Cyst ed. After the tumour it was filled with lint.	Not stated.		Death three weeks after the operation, from suppuration of the cyst.		Simon's Table, *op. cit.*

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Nature of the tumour
7.	1844.	Dr. Bühring Berlin.	54.	Had several children. The disease of six years duration. Great distension of the abdomen; excessive digestive derangement; dyspnœa; and difficulty in evacuating the urine and fæces.	Not stated.	Five inches.	Ovarian
8.	September 1st, 1848.	Dr. Clay, Manchester.	27.	Disease of three years duration. Previous to that time had not menstruated regularly for four months. Tapped once.	Not used.	Not stated.	Cystic and ovarian
9.	August 13th, 1852.	Mr. John Crouch, Bruton, Somerset	57.	Widow; mother of three children. Tumour first noticed five years previously, when diuretics, iodine, and mercury were administered, and pressure used. Three years ago tumour disappeared suddenly. In 1851, abdomen enlarged on the right side, for which she was tapped in 1852, and a hard, immoveable substance remained. Condition became very distressing, and she earnestly requested something to be done for her relief.	Not stated.	Two inches, as exploratory.	Ovarian cy solid matte traces of cal deposi
10.	October 14th, 1853.	Dr. R. L. Howard, America.	28.	Married; mother of four children. Previously to her last pregnancy tumour completely distended the whole abdomen. Tumour increased rapidly during the last two years. Catamenia absent for six months, and supposed she was again pregnant, believing she felt the child's movements. Tapped twice.	Not stated.	From near umbilicus to the pubes.	Cystoid of left ova
11.	1850.	Dr. Kiwisch, Würzburg.	45.	The tumour had existed upwards of a year. Very great distension of the abdomen; tapped; rapid accumulation of the fluid; the patient much reduced.	Not mentioned.	Long.	Multilocular right ova
12.	1850.	Drs. Küchenmeister and Steinart, Zittau.	36.	Disease of five years duration. The condition of the patient very distressing, but the general health good.	Not stated.	Three inches.	Large ova cyst, filli whole abd

of and accidents during ıe operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
r could not be removed ›e of the adhesions. The evacuated, the cyst par-, and then filled with	Not stated.		Death twelve days after the operation, from suppuration of the cyst.		Scanzoni's *Beiträge*, 1858; Simon's Table.
ıttachment to the right l mass, of about 4 lbs. in ound to be firmly adhe-ljacent parts, the remo-ı was thought to be h too much risk. The contents were removed, ınt passed into the sub-solid mass, which was ıt the lowest part of the	Not stated.	Eventually recovered.		She is now (1848) capable of attending to her usual avocations.	*Results of Ovariotomy*, &c., 1848, p. 47.
red and a portion, three gth, was extracted, and urniquet" being applied, he size of a crown piece, Seventeen small arteries application of ligatures. g portion of the cyst was l into the abdomen and	By three sutures and adhesive straps.	On the fourteenth day she was considered convalescent.		Death took place suddenly on the 13th of December. It was found that matter had escaped into the peritoneal cavity.	*Lancet*, vol. i, p. 41, 1854; and kindly revised by the operator.
r was found firmly adhe-rietal peritoneum. The e separated to some ex-r character were such as perator to abandon the ı portion of the cyst was › tent introduced into its	Not stated.		Died on the seventeenth day, from a low form of fever.		*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859; Hamilton's Report.
›sions to the omentum, tomach. The tumour entirely removed. The ls were singly secured.	Not stated.		Death in twenty-three hours, from peritonitis.		Scanzoni's *Beiträge*, 1858; Simon's table.
s adherent to the trans-The adhesions could not ›arated. The empty sac ›n out as far as possible	Not stated.	After twelve weeks the patient was dismissed tolerably well.		Died in nine months, from peritonitis.	Scanzoni's *Beiträge*, &c., 1858; Simon's table.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of th tumo
13.	September, 1845.	Mr. Lane, London.	40.	Married. Disease had existed about four years.	Not used.	Ten inches.	A mult ovarian cy
14.	1826.	Dr. Martini, Lübeck.	24.	Had children. The tumour of a year's duration. Tapped four times; on one of these occasions a tent was introduced, and kept in for some time. General condition of the patient before the operation very good.	Not stated.	Nine inches.	Degener the left ov
15.	1856.	N. N., C. in *Sachsen*.	30.	Previously tapped five times.	Not stated.	From the navel to the symphysis.	Convolu ovarian cy
16.	July 27th, 1846.	Mr. Page, Carlisle.	39.	Married; had nine children; six of them still-born; last seven years ago. Tumour of fifteen months duration, following menstrual suppression from exposure to cold; menses returned last three months. Tumour moveable.	Not stated.	An inch and a half, afterwards extended to three inches.	Ovarian
17.	March 30th, 1854.	Mr. Poland, London.	30.	Patient was already much reduced. Had obstinate vomiting, which resisted all treatment.	Not stated.	Four inches.	Large mu lar ovarian Pedicle ve
18.	December 25th, 1847.	Dr. Prince, America.	25.	Married; had children. Tumour of eighteen months duration. Menses irregular.	Not stated.	Three inches.	Solid tum right ovary

s of and accidents during the operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
ions were extensive to the posterior abdominal wall, liver, the cava, and the apsule; some of these were ugh. The bulk of the cyst e lessened sufficiently by allow of its removal as a e pedicle being first se- t two-thirds of the mass d. Some more adhesions through or divided with nd the remainder of the away with the exception which was left attached , the right renal capsule, . There was hæmorrhage nt of a pint during the The pedicle was left with- inal cavity.	By twelve interrupted sutures, but not through the peritoneum.		Death in three days, from peritonitis.		The particulars kindly communicated by the operator to the reporter.
ur could not be removed ice of the very strong ad- he bladder, rectum, and superior accessible part l and the bleeding vessels ly.	Not mentioned.		Death in thirty-six hours, from peritonitis and hæmorrhage.		Scanzoni's *Beiträge*, 1858; Simon's table
ision; no accident in the	Not mentioned.		Death in seven days, from peritonitis.		Scanzoni's *Beiträge*, 1858; Simon's table
vacuated; drawn partly nd to be firmly adherent ches of intestine, and its e was very adherent to the parts. Extirpation was and the greater part of the in a ligature and removed, ase behind.	Not mentioned.		Died in thirty-six hours, from hæmorrhage, owing to the ligature becoming partially detached.		The particulars kindly communicated to the reporter by the operator.
adhesions to the fundus sac was excised an inch ase of its pedicle; the was checked partly by applied previously to l partly by the actual	The edges of the remaining portion of the cyst were sewed in the wound.		Died in thirty-eight hours, from peritonitis.		Focks' table, *op. cit.*, p. 382.
present; extirpation a- umour incised, and part l portions removed; but ular; tent inserted; puru- e continued a long time.	Not stated.	Recovered.		Gave birth to a child April 10th, 1849.	Dr. Lyman's Report, Boston, 1856, case 237.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of th tumo
19.	1853.	Dr. Siebold, Darmstadt.	24.	Had children. The disease of a year and a half's duration. Considerable distention of the abdomen; dyspnœa; emaciation. Constitutional powers still good.	Not mentioned.	Long.	Large ov cysti
20.	June 1st, 1846.	Mr. Samuel Solly, London.	24.	Sallow complexion; menstruation regular; no evidence of disease of the liver, kidneys, or heart. General health tolerably good. Opium administered to ascertain its effects, and was well borne.	Not stated.	Three inches.	Simple o cyst
21.	August 20th, 1850.	Mr. J. G. Wilson, Bristol.	24.	Unmarried. Thin, but not emaciated. Never tapped. Menstruation regular. General health good.	Chloroform administered.	Two and a half inches.	Simple o cyst
22.	November 25th, 1850.	Mr. J. G. Wilson, Bristol.	39.	Unmarried. Duration of the disease six years. Had not been tapped.	Chloroform was administered.	Two and a half inches.	Simple o cyst
23.	November 25th, 1850.	Mr. J. G. Wilson, Bristol.	45.	Married; had several children; two of the children were born after the disease was first noticed. Tapped once. Addicted to spirit drinking.	Not stated.	Two and a half inches.	Simple o cyst
24.	Not given.	Unknown.	48.	Tumour of one year's duration. Tapped six times.	Not stated.	Long.	Ovarian with wall an inch i nea

SUMMARY.—Of these cases of partial excision, *ten* recovered from operation and *fourteen* died.

Respecting the subsequent condition of the successful cases, recov was apparently complete in seven; one died in nine months from periton one died in four months from the escape of the contents of the cyst into

of and accidents during ie operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
was very firmly adhe- operation could not be consequence of the tumour was partially d the edges of remain- nour joined to those of ision.	Not mentioned.		Death thirty-six hours after, from peritonitis.		Scanzoni's *Beitrage*, 1858; Simon's table.
; pedicle pierced, and tures broke in tying it; e was used, and the ed in two portions and xcised. A portion of t.	By three interrupted sutures, plaster, &c.		Eleven hours after the operation hæmorrhage took place, and never rallied afterwards.		*London Medical Gazette*, July 10th, 1846.
no adhesions. A por- t, forming a bag, eleven nd fifteen inches wide, Thirteen ligatures were bleeding vessels, and of the cyst returned omen.	Wound closed by three sutures.	Wound healed on the 8th of September, after which she did well.		Continues in better health than has been for years.	*Provincial Medical Journal*, 1851, p. 34.
drawn out, evacuated, portion excised, and ten ed to the bleeding ves- naining portion of the ied within the cavity of	Wound closed by three sutures.	Wound quite healed on the sixth day. Flatulence caused much inconvenience.		In 1851 was quite well.	*Provincial Medical Journal*, 1851, p. 35.
dhesions to the mesen- -colon. The cyst was evacuated, and a small . The hooks gave way eceded into the cavity n. Much hæmorrhage from which she was a llying.	Wound closed by three sutures.		Death on the fifth day, from peritonitis.		*Provincial Medical Journal*, 1851, p. 35.
two-thirds of the sac could not be entirely ing to its broad base ts to os innominatum.	Not mentioned.		Died on the sixth day, from fever and tetanus.		*British and Foreign Medical Review*, October, 1843, p. 400, from Froriep's Notices.

l cavity, and of the other the report gave no account.

the unsuccessful cases, four died from hæmorrhage, one from n, six from peritonitis, two from the effects of the suppuration of st, and one on the seventeenth day from fever.

TABLE IV.—CASES OF

A.—EXTRA OVARIAN

No. of case	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Natu of the tumo
1.	1843.	Dr. J. L. Atlee, America.	42.	No account of duration, &c.	Not stated.	Long.	Fun uterine tum
2.	August 28th, 1844.	Dr. W. L. Atlee, Philadelphia.	24.	Unmarried.	Not stated.	From umbilicus to pubis.	Extra fibrous, nearly
3.	November 24th, 1849.	Dr. W. L. Atlee, Philadelphia.	39.	Married. Menses present at the time of the operation, and continued without interruption.	Anæsthesia induced.	From one inch above the umbilicus to pubis.	Extra fibrous, 6 lb
4.	May 20th, 1851.	Dr. W. L. Atlee, Philadelphia.	45.	Married.	Anæsthesia induced.	From two inches above the umbilicus to the pubis.	Tumour uterine, weighin
5.	March 3rd, 1853.	Dr. W. L. Atlee, Philadelphia.	40.	Married.	Anæsthesia induced.	From two inches above the umbilicus to the pubis.	Three uterine fi mours, 4 l
6.	October 4th, 1851.	Dr. P. J. Buckner, America.	Not given.	Married; mother of nine children. Tumour observed about two years, commencing after her eighth confinement. Suffered much from colic.	Not stated.	Nine inches.	Mesen
7.	January 16th, 1844.	Dr. Clay, Manchester.	52.	Disease of sixteen years duration. Abdomen enormously distended. Menstruation always irregular, but never suppressed. Ascites present, but effusion not large in quantity.	Not used.	Twelve inches.	Enlarged weighing

EMPTED OVARIOTOMY.

URS ONLY REMOVED.

of and accidents during ie operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
moved.	Not stated.		Death on the fifth day, from hæmorrhage.		*American Journal of Medical Sciences*, April, 1845; Atlee's Table.
ring the operation very Tumour removed.	Not stated.	Had peritonitis, but recovered.		Died three years afterwards of phthisis.	*American Journal of Medical Sciences*, April, 1855.
noved.	Not stated.	Recovered.		Died thirty-nine days afterwards, from cholera.	*American Journal of Medical Sciences*, April, 1855.
um and small intestines l remained so during the l were returned with	Not stated.		Died from hæmorrhage on the third day.		*American Journal of Medical Sciences*, April, 1855.
embedded in the sub-uterus was enucleated. estines were forced out, ulty replaced.	Not stated.		Death from peritonitis on the third day.		*American Journal of Medical Sciences*, April, 1855.
was bound to the pos- f the abdomen by little flection of peritoneum. nt for twelve inches to stine, which was sepa- l vessels ligatured and d. On the ninth day pened, and about two posed blood removed.	Not mentioned.	Recovered within seven weeks.		The patient is still living.	*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859.
and uterus extirpated, vagina into a *cul de sac*. soon and easily accom-	Not stated.		Inflammation set in, from which she died on the fifteenth day after the operation.		*Results of Ovariotomy*, 1848, p. 53.

No. of case.	Date of the operation.	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natur of th tumou
8.	Not given.	Dr. Clay, Manchester.	Not given.	No account of duration, &c.	Not stated.	Long.	Uterine tu
9.	1848.	Dr. P. M. Crume, America.	30.	Married at nineteen years of age; supposed confinement was about to take place; symptoms subsided, and were renewed in about a year; these attacks annually occurred for about nine years, impairing the general health: a short time previous to the tenth attack extirpation of the tumour resolved upon.	Not stated.	Not given.	Irregular, rently the tubular con weighing
10.	March 21st, 1827.	Dr. Granville, London.	Between 30 and 40 years.	No account.	Not stated.	Nine inches.	Fibrous t of the u weighing
11.	November 21st, 1843.	Mr. A. M. Heath, Manchester.	46.	Unmarried; never pregnant; had suffered from excessive uterine discharges four years. Anæmic. Tumour first noticed twelve months ago, in the left hypochondriac region. Had no pain. Diagnosed as ovarian.	Not stated.	From near the ensiform cartilage to near the pubis.	Uterine t weighing
12.	January 8th, 1848.	Dr. S. Parkman, America.	27.	Single. Tumour of one year's duration. Menses regular. Tapped, but no fluid followed.	Not stated.	From near ensiform cartilage to the pubes.	Fibrous t of the u weighing 3l

f and accidents during operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
as extirpated.	Not stated.		Died.		Kindly communicated by Dr. Clay to the reporter.
as removed.	Not mentioned.		Patient died on the third day, from inflammation.		*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859.
as removed.	Not stated.		Died on the third day, from venesection being unnecessarily performed.		*London Medical Gazette*, vol. i, p. 540.
was made, the finger l the tumour then dis- connected with the t was determined to *mâsse*. Two double passed through the ust below the circum- tumour, and firmly rts were then excised No hæmorrhage.	By seven interrupted sutures, plaster, and bandage.		Death after seventeen hours, from hæmorrhage.		*London Medical Gazette*, vol. xxxiii, 1843, p. 309.
escaped on making in- ır tapped, but no fluid being raised was found growth, involving the f the uterus. Ligatures ırough and around the this organ, which were ; force, and the tumour ovaries found healthy.	Not stated.		Died in twelve hours, of hæmorrhage.		Dr. Lyman's Report, Boston, 1856.

No. of case.	Date of the operation	Name of the operator.	Age of the patient	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Nat of t tum
13.	September, 1853.	Dr. E. R. Peaslee, America.	35.	Widow; mother of four children. Tumour in the right iliac region, which was first noticed about eighteen months previously. Leucorrhœa; difficulty in micturition, and numbness of the right extremity. Had inflammation of the pelvic organs after her last labour, seventeen months ago. The tumour moveable, and falls in the pelvic cavity on assuming the erect position. Catheter used to relieve the bladder for several weeks. The sound introduced three and a half inches into the uterine cavity. Uterus perfectly moveable while the tumour remained stationary. Patient insisted on the removal of the tumour.	Sulphuric ether administered on a towel.	Six inches.	Fibrous of the

SUMMARY.—Of the nature of the tumours in the preceding c *eleven* were uterine growths, *one* mesenteric, and *one* tubular, from posed extra-uterine pregnancy.

Three recovered from the operation; one of these was living nine y

s of and accidents during the operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
ıcision a trocar was thrust peared a dense sac filled nothing but blood fol- incision was enlarged; found that the tumour ım the uterus. The punc- y the trocar was bleeding ıe operation could not be The intestines protruded ce of attempts to vomit. was extended and a liga- round the uterus as soon ıd excised. The hæmorr- exceed six ounces. The e brought out at the low- he wound, by the side of m elastic tube was left	By six needles, carried through peritoneum.		Died, from peritonitis, on the fifth day.		*American Journal of Medical Sciences*, April, 1855.

rds, one died from phthisis within three years, and one from cholera rty-nine days after the operation.

n of the cases died from the effects of the operation.

TABLE IV.—CASES O

B.—ABANDONED

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of th tumo
1.	September 2nd, 1848.	Mr. A. Anderson, London.	34.	Married nine years; had one child. Duration of disease two years and a half. Tapped twice; dyspnœa; emaciated and debilitated.	Chloroform on a sponge by an ordinary apparatus.	Ten to twelve inches.	Three cyst ovar
2.	1848.	Mr. J. M. Arnott, London.	23.	No account.	Not stated.	Three inches.	Double cyst of th
3	1846.	J. Y. Arrowsmith, Shrewsbury.	22.	Tapped once for ovarian dropsy; appeared a favourable case for the operation.	Not mentioned.	Six inches.	Ovarian
4.	Not given.	Dr. Bellinger, America.	Not given.	Tumour existed many years; very painful.	Not stated.	Not stated.	Not men
5.	January 6th, 1848.	Dr. F. Bird, London.	30.	Married; never pregnant. First perceived enlargement of the abdomen in January, 1844. In 1846 was treated by Mr. I. B. Brown, by tapping and pressure; again tapped; death being imminent the operation was justifiable. Extreme suffering from distension.	Chloroform administered	Ten inches.	Very lar nant
6. to 23.	Not given.	Dr. F. Bird, London.	Not given.	Seven of these patients were married, one of whom was advanced in life, and exhausted by long suffering; six were unmarried. In five the reports gave no account of duration, &c.	Not stated.	Exploratory incisions only in all the cases.	All the were s ovarian.

EMPTED OVARIOTOMY.— CONTINUED.

EQUENCE OF ADHESIONS.

ıgs of the operation and ter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
extensive.	Peritoneum avoided.		Died in three weeks probably from exhaustion.		Kindly communicated by the operator.
tapped. Adhesions firm.	Not mentioned.		Died.		Dr. R. Lee's Table, case 88.
strong in every direction.	Not mentioned.	Recovered.		Tapped some weeks afterwards.	Mr. T. S. Lee's Table; and kindly revised by the operator.
extensive.	Not mentioned.	Recovered.		No account.	Dr. Lyman's Report, Boston, 1856, p. 146.
r was found adherent posnearly all the abdominal the tumour escaped from ıal cavity it brought the on along with it, which be separated with the	Not mentioned.		Died twenty-eight hours afterwards.		*Lancet*, 1850, vol. ii, p. 592.
ion was abandoned in all account of the adhesions. s the tumour was evacu- incision was made.	Not mentioned.	Seventeen of the patients recovered from the operation.	One died the next day from the bursting of an abscess of the liver.	Of the seventeen cases two lived six months; two, twelve months; two, nearly two years; two, nearly three years; and four were living at the time of the report. The subsequent condition in six cases is not given.	*Lancet*, 1850, vol. ii, p. 592.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of th tumo
24.	Not given.	Dr. George C. Blackman, America.	Not given.	No account of duration, &c.	Not stated.	Exploratory.	After d tumour wa to be comp both uter ovaries.
25.	1844.	Dr. Bühring, Berlin.	38.	Had children. Disease of one and a half years duration. Great distension of the abdomen; digestive derangements; frequent sickness; asthma; great emaciation; condition, cachectic.	Not stated.	Lateral.	Thin-walle
26.	Not given.	Mr. George Bullen, Ipswich.	Not given.	Tapped three times.	Not stated.	Not given.	Two large an cysts impacted pelvis.
27.	October 26th, 1842.	Dr. Clay, Manchester.	47.	Married. Had an abdominal enlargement for several years; tapped about two years previously, when only about two pints of blood were extracted; urgent for the operation; catamenia appeared on the day of the operation.	Not used.	Small.	Malignan 30 lbs. in w
28.	October 5th, 1843.	Dr. Clay, Manchester.	46.	Married. Treated at first for ascites; tapped; dyspeptic symptoms and general health became improved; enlargement still continued; exploratory incision recommended.	Not used.	Four inches.	Ovarian hydatids.
29.	July 23rd, 1845.	Dr. Clay, Manchester.	38.	Had suffered from frequent attacks of inflammation; married; adhesions suspected, and an exploratory incision recommended.	Not used.	Four inches.	Multilo datid cysts
30 to 34.	No date given.	Dr. Clay, Manchester.	Ages not given.	No account.	Not stated.	From one and a half to two and a half inches.	Not stat
35.	1838.	Dr. Dieffenbach, Berlin.	44.	Married. Tumour perceived from eight to twelve years; much inconvenience; the woman was otherwise healthy and strong.	Not stated.	Long.	Hard, ha vascular ti

gs of the operation and er of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
xtensive.	Not mentioned.		Died a few days after the operation.		*Ohio Medical and Surgical Journal*, vol. xii, No. 2, 1859.
xtensive. Half a pail of and much decomposed gula evacuated. The d with lint dipped in a m.	Not mentioned.	A fistula formed. Recovery in five weeks.		After five weeks the patient went about her usual business.	Scanzoni's *Beiträge*, 1858; Simon's table.
xtensive. The sac could out so as to reach the he operation was aban-	Not stated.		Died on the fifth day, from peritonitis.		The particulars kindly furnished to the reporter by the operator.
adherent to the perito- rder to lessen the tu- ierced in several places, t of blood issued from	Not stated.		Died on the sixth day.		*Results of Ovariotomy*, &c., 1848.
era diseased and adhe- folds of white worsted roduced into the abdo- one end being brought est part of the wound.	By interrupted sutures.	Threads retained for four months, and she eventually recovered.		Five years afterwards in good health.	*Results of Ovariotomy*, 1848.
ihesions. The sac was thick string of threads id one end brought out	By four interrupted sutures.	Discharge excessive. By the fourth month had nearly recovered.		Two years afterwards in good health.	*Results of Ovariotomy*, 1848.
; removed on account of idhesions.	Not mentioned.	All recovered from the operation.		One was tapped, and died thirty-five days after the incision, from exhaustion.	*British Record of Obstetric Medicine*, p. 394, &c.
xtensive. Violent hæ- tapping the tumour, ested by a tent.	Not stated.	Eventually recovered.		Unknown.	Scanzoni's *Beiträge*, &c., 1858; Simon's table.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Nature of the tumour
36.	October 21st, 1833.	Dr. Dohlhoff, Magdeburg.	27.	Married at twenty-four years; never pregnant; menses regular since seventeen years of age.	Not mentioned.	From near the navel to the symphysis.	Hydatid, an, omentu tumours.
37.	Not given.	Dr. E. L. Dudley, America.	Not given.	No account.	Not stated.	Not mentioned.	Not stated
38.	July, 1846.	Dr. Elkington, Birmingham.	37.	Married; mother of two children. Tumour first noticed in 1843; tapped several times.	Chloroform used.	Six inches.	Not stated
39.	Not given.	Dr. John Farrell, America.	Not given.	Married. Abdomen much distended; tapped five times.	Not stated.	Eight and a half inches.	Cystoid ovary.
40.	Not given.	Dr. Galenzowski.	27.	Widow. Scrofulous constitution; tumour noticed two years previously; abdomen much distended; menstruation regular.	Not stated.	Five inches.	Tumour right ovary
41.	March 10th, 1850.	Dr. Gibson, America.	39.	A prostitute. Never pregnant; menses regular; duration not stated; tapped ten times.	Not stated.	From near the umbilicus to pubes.	Malignant ease of bot rica.
42.	1827.	Dr Granville, London.	Not given.	No account of duration, &c.	Not stated.	Nine and a half inches.	Not stated
43.	November 13th, 1858.	Dr. J. W. Hamilton, Columbus, America.	36.	Married; had three miscarriages. Constitution good, although greatly emaciated and feeble; tumour noticed eight years previously; menstruated until within a few months.	Not stated.	Eight inches.	Cystoid ov about 18 l weight.
44.	Not given.	Mr. Hargraves, England.	Not given.	No account of duration, &c.	Not stated.	Not given.	Cystoid ov

ngs of the operation and cter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
extensive to the rectum, terus, &c.	Not stated.		Death in eight hours, from exhaustion.		Scanzoni's *Beiträge*, 1858; Simon's table.
present.	Not mentioned.	Recovered.		Not stated.	Dr. J. T. Bradford's Report, Kentucky.
sions between uterus and	Not stated.		Died on the fourth day, from peritonitis.		*Provincial Medical and Surgical Journal*, 1851; and kindly revised by the operator.
herent to uterus, intes- abdominal parietes. A was introduced into an le into the sac.	By sutures and straps.	Recovered.		Died about a year after the operation, from pneumonia.	Hamilton's Report, *op. cit.*
y adherent posteriorly. as incised; a thread was through one of the sides and the ends brought out i.	By four sutures.	At the end of seventy days the patient was discharged nearly well.		Not stated.	*London Medical Gazette*, vol. v, 1829.
extensive. A large quan- tic fluid escaped on the g made.	Not stated.		Died on the twenty - fourth day.		Dr. Lyman's Report, Boston, 1856
extensive.	Not stated.	Recovered.		No account.	*London Medical Gazette*, 1842-3, p. 540.
so firm that it was re- acticable either to recog- ate them. Trocar intro- , but no fluid escaped.	Ten silver wires introduced		Died forty-two hours afterwards, from gangrene, &c.		*Ohio Medical and Surgical Journal*, vol. xi, No 3, January, 1859.
extensive, and compli- tumour about the size of d at birth.	Not stated.		Died five days afterwards.		Dr. R. Lee's, table, case 17.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of th tumou
45.	1841.	Dr. Hayny, Jungbunzlau.	Not given.	No account of duration, &c.	Not stated.	Not given.	Multiloc ovaria
46.	Not given.	Dr. R. L. Howard. America.	Not given.	No account of duration, &c.	Not stated.	Not given.	Not menti
47.	August 30th, 1858.	Mr. Hutchinson, London.	28.	Married. Disease dated from previous November. Tapped several times. Patient determined to have the operation performed.	Not stated.	Four inches.	Polycystic o
48.	1850.	Dr. Kiwisch, Würzburg.	36.	Disease of one and a half years duration. Rapid increase of the tumour; dyspnœa; the patient very desponding and emaciated.	Not stated.	Three and a half inches.	Cystosarc the left ova
49	November, 1846.	Mr. Lane, London.	31.	Unmarried. Disease had existed five years; suffered much from disturbed digestion.	Not used.	Five inches.	Cystic ov
50.	April 24th, 1847.	Mr. Lane, London.	40.	Married. Disease had existed three years; was emaciated, and had been several times tapped.	Not used.	Two inches	Solid ovari mour and as
51.	October 15th, 1848.	Mr. Lane, London.	54.	Unmarried. Disease had existed eight years. In tolerable health.	Not used.	Three inches.	Multiloc ovaria

lings of the operation and acter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
adhesions. An incision into the tumour, and a e quantity of the contents	Not stated.		Death on the fourth day.		Scanzoni's *Beiträge*, 1858; Simon's table.
adhesions.	Not mentioned.		Died within seven days.		Hamilton's Report, *op. cit.*
adhesions, which were y the hand on both sides of as far as the knuckles. On the hand into the cyst, it ed that the free edge of the d into the cyst and was it. A catheter was left in to endeavour to obliterate	By silver wire sutures.		Died from peritonitis and gangrene.		*Medical Times and Gazette*, October 9th, 1858; and kindly revised by the operator.
of the sound, the tumour enerally adherent.	Not mentioned.	Rapid recovery.		Died four months afterwards.	*Scanzoni's Beiträge*, 1858; Simon's Table.
s extensive.	By interrupted sutures, not carried through the peritoneum.	Recovered rapidly.		Died in two years from attempted suppuration of the cyst, by the retention of a catheter in the trocar wound.	The particulars kindly communicated to the reporter by the operator.
s extensive.	By three deep interrupted sutures, not carried through the peritoneum.	Recovered in a few days.		Died of the disease about four years after the operation.	The particulars were kindly communicated to the reporter by the operator.
adhesions.	By interrupted sutures, not carried through the peritoneum.	Recovered rapidly.		Died six years after the operation, from inflammation of the condensed mass of the empty cyst.	The particulars were kindly communicated to the reporter by the operator.

No. of case.	Date of the operation	Name of the operator.	Age of the patient	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Nature of tumour
52.	November, 1849.	Mr. Lane, London.	24.	Unmarried. Disease had existed several years.	Not used.	Tapped only.	Supposed cyst. Fluid lysed by M gers: comp water with only of al and soda.
53.	January 1st, 1858.	Dr. T. W. McArthur, America.	16.	Married. Abdomen considerably distended. In April, 1857, had an attack of acute peritonitis. Sufferings great, and general health failing.	Not stated.	Six inches.	Ovarian c
54.	Not given.	Dr Ephraim Mc Dowell, America.	Not given.	Had mercurial treatment for three or four months, for a hard and painful abdominal tumour, which appeared fixed and immovable.	Not stated	Oblique. Nine inches.	Cystoid an ovarian.
55.	1822.	Dr. Ephraim Mc Dowell, America.	55.	No account of duration, &c.	Not stated.	Six inches.	Cystoid ov
56.	January 1st, 1827.	Dr. Ephraim Mc Dowell, America.	38.	Married. Menstruation regular. Disease noticed about twelve months previously. Abdomen much distended.	Not stated.	Not given.	Ovarian cy
57.	October 29th, 1849.	Mr. C. De Morgan, London.	25.	Unmarried. Tumour appeared at the age of twenty-two, and increased rapidly.	Not stated.	Small.	Multiloc ovarian
58.	Not given.	Dr. Mott, New York, America.	35.	Married. No account of duration, &c.	Not stated.	Not given.	Malignant the left ova
59.	Not given.	Dr. R. D. Mussey, America.	40.	Married; mother of several children. Abdomen much distended.	Not stated.	Three inches.	Ovarian cy

ngs of the operation and cter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
extensive. Inflammation produced by a strip of uced by the wound made The strip of linen re- ie fourth day.	No suture required.	Recovered without suppuration. Had intense pain for fourteen days.		Remained in good health. Now living	The particulars kindly communicated by the operator to the reporter.
were tapped. The anterior portions of the tu- readily separated by the lateral and superior sur- found so firmly adherent e operator to desist.	Not stated.	Recovered from the effects of the operation.		Four months afterwards was in improved health.	Hamilton's Report, *op. cit.*
dherent to fundus of the bladder; cyst incised and blood escaped; intestines from the blood, and the d.	By interrupted sutures, adhesive straps, &c.	Recovered from the operation.		Was living six years afterwards.	*London Medical Gazette*, vol. xxxv, p. 745.
ed; adhesions extensive.	By interrupted sutures.	The patient recovered in five weeks.		Living twenty years afterwards.	Dr. J. T. Bradford's Report, America, 1859.
strong; the patient be- y and excessively debili- he wound was closed.	Not stated.	Recovered from the operation.		Died about four months afterwards.	Hamilton's Report, *op. cit.*
adhesions to the perito-	Not stated.	Recovered from the operation.		Abdomen in fourteen days as large as before.	Dr. H. Lee's Table, and West on *Diseases of Women*, vol. ii, p. 164.
dherent to the pelvis.	Not stated.		Died on the third day, from peritonitis.		Dr. Lyman's Report, Boston, 1860, case 229.
extensive; sac emptied stitched to the margins nal wound by interrupted	Not mentioned.	Recovered from the operation.		Disease returned. Died in about a year after the operation.	Hamilton's Report, *op. cit.*

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of t tume
60.	July, 1828.	Dr. R. D. Mussey, America.	40.	Married; mother of thirteen children. Tumour of two years duration. Menses uninfluenced by tumour.	Not mentioned.	From umbilicus to the pubes.	Cystoid o ovary.
61.	November 8th, 1850.	Mr. G. Norman, Bath.	23.	Tumour observed eight months previously; quite moveable. Prolapse of the vagina. Os uteri felt with great difficulty, and found under the pubes. Tumour as large as an impregnated uterus of the fourth month.	Chloroform administered	Five inches.	Not give
62.	1850.	Mr. J. Paget, London.	24.	Married nine months; speedy pregnancy; abdomen large; labour natural; constitutional disturbance; jaundice. Tapped eleven weeks after delivery: seven gallons of fluid evacuated, containing lymph and pus. No bad symptom followed.	Not used.	Three inches.	Single cyst.
63.	September, 1854.	Mr. J. Paget, London.	43.	Health very much reduced. Tumour had existed six months, and increased rapidly. Tapping had been attempted, but failed, the fluid being too thick to escape by the canula. Evidently sinking fast.	Not stated.	Two inches.	Ovarian c
64.	Not given.	Mr. J. Paget, London.	22.	No account of duration, &c.	Not stated.	Two inches.	Ovarian c
65.	1853.	Dr. Rothmund.	24.	Unmarried. The disease of two years duration. Constitution very feeble. Tapped once; rapid recollection of the fluid.	Not stated.	Five inches.	Large cystoid.
66.	Not given.	Dr. N. Smith, America.	Not given.	Tapped on two or three occasions.	Not stated.	Not given.	Ovarian c

gs of the operation and ter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT. Recovered.	RESULT. Fatal, and the cause of death.	Subsequent condition after recovery.	Source of information.
verse colon was found to rt of the tumour, and to herent to it; the cyst was tent inserted.	Not stated.	Recovered from the operation.		Recovered; and at the end of a year gave birth to her fourteenth child, and no sign of the disease returning.	Hamilton's Report, *op. cit.*
xtensively adherent to the ietes; also, firmly on each incision below, and to small intestine two inches	By five interrupted sutures, adhesive straps, &c.	Recovered from the operation.		Tumour gradually decreased in size, and general health became improved.	*Provincial Medical and Surgical Journal*, January 8th, 1851.
intimate to the parietal Sac seized with double it rent, and five gallons of caped. Edges of sac fas- and of abdominal walls.	Sutures not carried through the peritoneum.		Died ninety-six hours after the operation.		Particulars kindly communicated by the operator to the reporter.
very intimate. The cyst and a quantity of jelly- acuated.	With sutures and plasters.		Inflammation of the cyst took place, from which she sank.		*Medical Times and Gazette*, November 25th, 1854.
adherent. A puncture and a large quantity of ated, and the wound	Not stated.	Recovered from the incision.		Two months after the operation went into the country, and eventually died in the Brighton Hospital.	*Medical Times and Gazette*, January 27th, 1855; February 24 and April 7, 1855.
extensive. Hæmorrhage paration of the adhesions. s incised and the wound	Not stated.		Died on the sixth day.		Scanzoni's *Beiträge*, 1858; Simon's table.
extensive. Sac punctured, acuated; and the wound	Not stated.	Slight peritonitis; but recovered.		The sac refilled, and the patient died in about a month.	Lyman's Report, Boston, 1856, case 249.

No. of case	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Natu of th tumo
67.	1848.	Mr. G. Southam, Salford.	35.	Tumour of two years duration. Health good.	Not stated.	Four inches.	Simple cyst.
68.	April 29th, 1853.	Dr. Tanner, London.	27.	Married twelve months; never pregnant. Catamenia regular till March last; not appeared since. Enlargement of abdomen commenced in August, 1852.	Chloroform used.	Exploratory; short.	Multilocul rian cyst.
69.	May 14th, 1853.	Dr. Tanner, London.	38.	Been married eighteen years. eleven pregnancies; the last eighteen months ago.	Chloroform used.	Exploratory; short.	Not stated
70.	October 1st, 1853, at Mildenhall, Suffolk.	Dr. Tanner, London.	32.	Married; mother of seven children; the last born in 1851. Tumour very large, and caused great suffering. Tapped twice.	Chloroform given.	Exploratory incision of seven inches.	Large mul lar ovarian.
71.	May 2nd, 1857.	Dr. Tanner, London.	42.	Married; never pregnant.	Chloroform given.	Exploratory incision short.	Multilocul rian.
72.	April 20th, 1827.	Dr. Trowbridge, America.	22	Married; had one child. Tumour of two years duration. Became pregnant and miscarried during the growth of the cyst.	Not stated.	Oblique, four inches.	Right ova
73.	Not given.	Unknown, reported by Mr. Hargraves.	Not given.	No account of duration, &c.	Not stated.	Not given.	Ovarian c

ıgs of the operation and :ter of the adhesions.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of Information.
		Recovered.	Fatal, and the cause of death.		
extensive.	Sutures not carried through the peritoneum.	Recovered.		Died subsequently, from Bainbrigg's operation.	The particulars kindly communicated to the reporter by the operator.
firm and extensive. The :apped.	Silk sutures, not through the peritoneum.	Recovered.		Died from the disease, November 6th, 1853.	*MS. Clin. Med.*, vol. ii, p. 367; kindly communicated by the operator to the reporter.
extensive and firm.	Silk sutures, not through the peritoneum.	Recovered.		Was lost sight of six weeks after the operation.	*MS. Clin. Med.*, vol. iii, p. 73; kindly communicated by the operator to the reporter.
were diagnosed before ıut the patient was so ;et relief that an incision)ping the adhesions might Adhesions very firm.	Silk sutures, not through the peritoneum.		Died from exhaustion twenty-four hours after the operation.		*MS. Clin. Med.* vol. ii, p. 141; kindly communicated by the operator to the reporter.
were diagnosed, but as killing the patient at- ; made to remove the lhesions very numerous.	Silk sutures, not through the peritoneum.	Recovered.		Died from the disease, December 27th, 1857.	Kindly communicated by Dr. Tanner, from *MS. Clin. Med.* vol. iii, p. 175.
ıxtensive. Sac emptied us; tent inserted.	Not stated.	A tube inserted on the seventh day. Recovered in fifteen days.		Two years afterwards had a child.	Dr. Lyman's Report, Boston, 1856, case 266.
adhesions, complicated ıur size of a child's head ve pints of dark grumous evacuated.	Not stated.		Died on the fifth day.		Dr. R. Lee's Table.

No of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed	Length of the incision.	Natu of t tumo
74.	Not given.	Unknown. America.	34.	Unmarried. Tumour of eight years duration. Tapped, and a pint of blood flowed through the canula.	Not stated.	Not given.	Fibrous ovaria, 46½ lbs.
75.	October 11th, 1843.	Mr. D. H. Walne, London.	54.	Married; had five children. Menses ceased at forty years of age. Tumour of four years duration. Tapped twice.	Not stated.	Five inches.	Ovarian
76.	April 22nd, 1844.	Mr. D. H. Walne, London.	30.	Unmarried. Disease of three years duration.	Not stated.	Three inches.	Ovarian
77.	Not given.	Dr. Weber, America.	Not given.	Married. No account of duration, &c.	Not stated.	Not given.	Ovarian
78.	Not given.	Dr. Weber, America.	45.	Married; always enjoyed excellent health. Tapped twice.	Not stated.	Not given.	Not sta
79.	1844.	Dr. Webster America.	37.	No account of duration, &c.	Not stated.	Large.	Ovari
80.	December, 1857.	Mr. T. Spencer Wells, London.	28.	Single woman. No account of duration, &c.	Not stated.	Exploratory incision only.	Large ov cystoid
81.	1855.	Dr. Wernher, Giessen.	16½.	Unmarried. Disease of two years duration. Tapped once; anæmic; great dyspnœa.	Not stated.	Small.	Multilo ovari
82.	Not given.	Mr. West, Tonbridge.	40.	Married. Tapped once.	Not stated.	Small.	Ovarian

SUMMARY.—Of these cases, *fifty-eight* recovered from the operat and *twenty-four* died.

Respecting the subsequent condition of the recovered cases, ten w living at the time of the reports; in some of these, many years had elap since the attempted operation, two had been pregnant since their recov and of twenty-one there was no account in the reports; of the oth

gs of the operation and ber of the adhesions.	Mode of uniting wound If sutures carried through peritoneum	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
extensive. Uterus was ave been perforated in	Not stated.		Died in three days, from peritonitis.		Lyman's Report, Boston, 1856, case 269.
xtensive.	Not mentioned.	Recovered.		Tapped afterwards.	*Lonaon Med. Gaz.*, vol. xxxiii, 1844.
xtensive. The sac burst of fluid escaped. The ely reduced.	Not stated.	Recovered.		Had children afterwards. In 1850 was quite well.	Dr. R. Lee's table.
nd firm adhesions. The ied by free incision.	Not stated.		Died in three days, from gangrene of the sac.		Hamilton's Report, *op. cit.*
close and firm.	Not stated.	Recovered.		Not stated.	Hamilton's Report, *op. cit.*
extensive. Peritoneal posed for two hours.	Not stated.	Recovered.		Died two months after the operation.	Dr. Lyman's Report, Boston, 1856.
ies were situated anterior r, and probably adherent id closed.	Not stated.	Recovered from the operation.		Died from rupture of a cyst, four months afterwards.	*Medical Times and Gazette*, February 19th, 1859.
extensive. The trocar ligatured, and the abdo- closed.	Not stated.		Death on the third day, from peritonitis.		Simon's table, *op. cit.*
xtensive.	Not stated.	Recovered.		Tapped seventeen times afterwards.	*Lancet*, 1839.

lived six months after the operation; five, twelve months; vo years; two, three years; one, four years; and three, six years. the fatal cases, six died from peritonitis, three from exhaustion, n the bursting of an hepatic abscess, three from gangrene of the d portions of the cyst, and in eleven the cause of death is not

TABLE IV.—CASES OF

C.—ABANDONED IN CONSEQUENCE O

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and preparations employed.	Length of the incision.	Nature of the tumour
1.	May 22nd, 1849.	Dr. W. L. Atlee, Philadelphia, America.	33.	Unmarried. Tumour noticed four years ago, since which time menses irregular. Tapped, and blood only escaped. Uterine sound passed two and a half inches only.	Anæsthesia induced.	From near umbilicus to pubis.	Uterine
2.	October 13th, 1849.	Dr. W. L. Atlee, Philadelphia.	43.	Unmarried. No account of duration, &c.	Anæsthesia induced.	From near umbilicus to pubis.	Uterine, in rated with cystiform tis
3.	April 13th, 1850.	Dr. W. L. Atlee, Philadelphia.	41.	Unmarried. Woman of colour. No account of duration, &c.	Anæsthesia induced.	From near umbilicus to pubis.	Uterine non-cellul
4.	December 20th, 1851.	Dr. W. L. Atlee, Philadelphia.	42.	Married. No account of duration.	Anæsthesia induced.	From near umbilicus to pubis.	Extra-ute fibrous
5.	Not given.	Dr. Crume, America.	Not given.	No account of duration, &c.	Not mentioned.	Not stated.	Tubal fœt
6.	June 6th, 1848.	Dr. Deane, America.	43.	Tumour "moveable, globular, symmetrical, smooth, and solid" of one year's growth.	Not stated.	From near umbilicus to pubis.	Fibrous tu the ute
7.	September, 1836.	Dr. Dohlhoff, Magdeburg.	23.	General health good. Had obstinate constipation. Tumour of ten months duration.	Not stated.	Six inches.	No trac tumo

TEMPTED OVARIOTOMY.—CONTINUED.

DISEASE BEING EXTRA OVARIAN.

edings of the operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
n tent was placed in the of the wound. No adhe- nt.	By interrupted and twisted sutures.	Sat up in nine days afterwards.		Died six months afterwards, from erysipelas.	*American Journal of Medical Sciences*, April, 1855.
lons present.	Not stated.	Recovered.		Died about four years afterwards.	*American Journal of Medical Sciences*, April, 1855.
were forced out and could returned in consequence of etic agent inducing a cata- ition of the muscles, which o the muscular parietes of en.	Not stated.	Recovered.		Still living, April, 1855.	*American Journal of Medical Sciences*, April, 1855.
he operation an abscess, abdomen, was opened, and of pus discharged. Gene- ns present.	Not stated.	Recovered.		Still living, April, 1855.	*American Journal of Medical Sciences*, April, 1855.
men was reclosed.	Not stated.	Not stated.		Not stated.	Dr. Lyman's Report, 1856.
men was reclosed.	Not stated.	Recovered.		Not stated.	Dr. Lyman's Report, 1856.
men was again closed as could be discovered.	Not stated.	Recovered.		No account.	Scanzoni's *Beitrage*, 1858; Simon's table

dings of the operation.	Mode of uniting wound If sutures carried through peritoneum.	RESULT.		Subsequent condition after recovery.	Source of information.
		Recovered.	Fatal, and the cause of death.		
e was found to be a tumour of the uterus. The extirtherefore not completed.	Not stated.		Died from exhaustion, fourteen hours afterwards.		Hamilton's Report, *op. cit.*
ns. Operation abandoned, e was found.	Not mentioned.	Recovered.		At the end of two months again increasing in size.	Dr. Lyman's Report, Boston, 1856.
ur was taken for a fluctund punctured by a trocar. orrhage. A ligature was d round the neck of the l the whole body above the ised.	Not stated.		Death on the fourth day, from peritonitis, and gangrene of the intestines.		*American Journal of Medical Sciences*, 1855, p. 393.
tapped; a few drops of issuing, though pierced in rections; the substance wn with a crackling sound; ut into and torn by the t introduced in hope of he tumour by suppuration.	Not stated.		On the fifth day sudden prostration and death.		Dr. Lyman's Report, Boston, 1856.
g the abdomen no tumour	Not stated.		Died.		Dr. Lyman's Report, Boston, 1856, case 202.
incision the ovaries were hy.	Not stated.	Recovered in twenty-one days.		Not stated.	Dr. Lyman's Report, Boston, 1856, case 255.
incision the uterus was s involved, and to constirgest part of the tumour, ration was abandoned.	Not stated.	Recovered.		No account.	Dr. Lyman's Report, Boston, 1856, case 248.
n of the peritoneum four citic fluid were discharged, ased ovary was to be found.	Not stated.	Recovered.		No account.	Dr. Lyman's Report, Boston, 1856, case 267.

No. of case.	Date of the operation	Name of the operator.	Age of the patient.	Duration and progress of the disease, and condition of the patient before the operation.	Anæsthetics used, mode of administration and prepara-tions employed	Length of the incision.	Natur of th tumou
22.	Not given.	Un-known, Ame-rica.	Not given.	Married. Tapped, and ovarian disease diagnosed.	Not stated.	Free.	Scirrhus omentu
23.	1852.	Un-known, Ger-many.	36.	Hard tumour in abdomen; had at the same time ascites.	Not stated.	Not given.	Cancerous of the u

SUMMARY.—Of these cases sixteen recovered, three died, and of the report furnished no account.

Respecting the subsequent condition of the recovered cases, two l six months; one, two years; one, four years; one, twenty-five years; t were living at the time of the report; and of eight the report gav account.

GENERAL TABLE OF THE RESULTS OF THE OPERATIONS.

THIS TABLE DOES NOT MENTION THE NAMES OF THOSE OPERATORS WHO HAVE HAD ONLY ONE CASE.

Name of Operator.	Completed ovariotomy.		Cases of partial excision.		Attempted ovariotomy.						Total of operations.
					Division A.		Division B.		Division C.		
	Recov.	Died.	Recov.	Died.	Recov.	Died.	Recov.	Died.	Recov.	Died.	
Ackley	1	1	—	—	—	—	—	—	—	—	2
Arrowsmith	—	1	—	—	—	—	1	—	—	—	2
Atlee, J. L.	2	1	—	—	—	1	—	—	—	—	4
Atlee, W. L.	10	9	2	1	2	2	—	—	4	—	30
Bardeleben	1	1	—	—	—	—	—	—	—	—	2
Baum	—	2	—	—	—	—	—	—	—	—	2
Bayless	1	1	—	—	—	—	—	—	—	—	2
Bennett, Ezra. . . .	1	1	—	—	—	—	—	—	—	—	2
Bird	8	4	1	—	—	—	17	2	—	—	32
Blackman	1	2	—	—	—	—	—	—	—	—	3
[illegible]	[illegible]										
ace	—	—	1	—	—	—	—	—	—	1	2
itenbaum	2	—	—	—	—	—	—	—	—	—	2
dd	1	—	—	1	—	—	—	—	—	—	2
, A. G.	2	1	—	—	—	—	—	—	—	1	4
ith, N.	1	—	—	—	—	—	1	—	1	—	3
ith, Protheroe . .	1	2	—	—	—	—	—	—	—	—	3
tham	2	2	—	—	—	—	1	—	—	—	5
ing	1	1	—	—	—	—	—	—	—	—	2
ner	2	2	—	—	—	—	3	1	—	—	8
wbridge.	—	—	—	—	—	—	1	—	1	—	2
Buren	1	1	—	—	—	—	—	—	—	—	2
ne	3	2	—	—	—	—	2	—	—	—	7
er	—	—	—	—	—	—	1	1	—	—	2
s, Spencer . . .	10	7	—	—	—	—	1	—	—	—	18
. . . . .	2	1	—	—	—	—	1	—	—	—	4
m	—	—	2	1	—	—	—	—	—	—	3
ritain, single cases	14	16	—	2	—	—	2	4	—	1	39
ica, single cases .	11	16	—	—	—	1	3	4	—	1	36
any, single cases .	1	18	—	2	—	—	2	2	—	1	26
own, single cases .	8	3	—	1	—	—	—	1	—	—	13
Total	212	183	10	14	3	10	58	24	16	7	537

in arresting its progress, but without success, and in many instances death was imminent. These cases of recovery may therefore be regarded as triumphs of surgical skill by means of which so many lives were secured, in several instances for years, which would otherwise have been lost to society.

It may be added that it is particularly requisite in endeavouring to obtain a successful issue to this operation to exercise a watchful supervision over every stage of it, as well as the after-treatment. Instances are not wanting where, through inattention in this respect, a sponge has been left in the abdominal cavity after the completion of the operation; the contents of the stomach have been ejected amongst the intestines; and these structures have been injured by puncturing them during the operation, leading in every instance to an unfortunate termination.

From a careful review therefore of the whole of the facts connected with the operation of ovariotomy, as gathered from the work now translated, and from the preceding tables, I have no hesitation in expressing my opinion that the operation is to be highly recommended in ovarian tumours under the circumstances previously narrated, as it is the only mode of removing a disease incurable by any other means.

Birmingham: Printed by JOSIAH ALLEN, jun., 10, Livery Street.

ERRATUM.—APPENDIX.

Page xxxvi, *for* No. 143 *read* No. 113.

The subsequent numbers of the cases to page lxxii inclusive require altering accordingly.

LANE MEDICAL LIBRARY

To avoid fine, this book should be returned on or before the date last stamped below.

W541 Clay, John 14182
C61 Diseases of the ovaries
1860 tr.from Kiwisch's clin-
cop.2 ical lectures.

NAME DATE DUE